

Patent Attorney's Docket No. 4085-235-27 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Michelle A.J. Palmer et al) Group Art Unit: 1645
Serial No.: 09/759,152) Examiner: Not yet assigned
Filed: January 16, 2001) ATTENTION: BOX SEQUENCE
For: SYSTEMS FOR SENSITIVE)
DETECTION OF G-PROTEIN COUPLED RECEPTOR AND)
ORPHAN RECEPTOR FUNCTION USING REPORTER ENZYME)
MUTANT COMPLEMENTATION)

DECLARATION PURSUANT TO 37 C.F.R. §§1.821-1.825

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

- I, Amy L. Miller, declare as follows:
- That the content of the paper and computer readable copies of the
 Sequence Listing, submitted in accordance with 37 C.F.R. §1.821(c) and
 (e), respectively, are the same in compliance with §1.821(f).
- 2. That the submission, filed in accordance with 37 C.F.R. §1.821(g) herein does not include new matter.

Serial No.: 09/759,152

That the substitute copy of the computer readable form, submitted in 3. accordance with 37 C.F.R. §1.825(d), is identical to that originally filed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements were made on information and belief and are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

May 21, 2001 Date

Amy L. Miller

Registration No. 43,804



SEQUENCE LISTING

<110> Palmer, Michelle A.J. Gee, Melissa Tillotson, Bonnie Chang, Xiao-Jia



Systems for Sensitive Detection of G-Protein Coupled Receptor and Orphan Receptor Function Using Reporter Enzyme Mutant Complementation

<130> 4085-235-27 CIP

<140> US 09/759,152

<141> 2001-01-16

<150> US 09/654,499

<151> 2000-09-01

<150> US 60/180,669

<151> 2000-02-07

<160>

<170> PatentIn version 3.0

<210>

<211> 6700

<212> DNA

<213> Unknown

<220>

<223> pICAST ALC.

<220>

<221> CDS

<222> (1457)...(4486)

<400>

ctgcagcctg aatatgggcc aaacaggata tctgtggtaa gcagttcctg ccccggctca 60 gggccaagaa cagatggaac agctgaatat gggccaaaca ggatatctgt ggtaagcagt 120 tectgeeceg geteagggee aagaacagat ggteeceaga tgeggteeag eecteageag 180 tttctagaga accatcagat gtttccaggg tgccccaagg acctgaaatg accetgtgcc 240 ttatttgaac taaccaatca gttcgcttct cgcttctgtt cgcgcgcttc tgctccccqa 300 geteaataaa agageeeaca acceeteact eggggegeea gteeteegat tgaetgagte 360 gcccgggtac ccgtgtatcc aataaaccct cttgcagttg catccgactt gtggtctcgc 420 tgtteettgg gagggtetee tetgagtgat tgactaeeeg teageggggg tettteattt 480

gggggctcgt ccgggatcgg gagacccctg cccagggacc accgacccac caccgggagg

540

caagctggcc	agcaactta	t ctgtgtc	tgt ccgat	tgtct agt	gtctatg	actgatttta	600
tgcgcctgcg	tcggtacta	g ttagcta	act agcto	tgtat ctg	gcggacc	cgtggtggaa	660
ctgacgagtt	ctgaacacc	c ggccgca	acc ctggg	agacg tcc	cagggac	tttgggggcc	720
gtttttgtgg	cccgacctg	a ggaaggg	agt cgatg	tggaa tcc	gaccccg	tcaggatatg	780
tggttctggt	aggagacga	g aacctaa	aac agttc	ccgcc tcc	gtctgaa	tttttgcttt	840
cggtttggaa	ccgaagccg	c gcgtctte	gtc tgctg	cagca tcg	ttctgtg	ttgtctctgt	900
ccgactgtgt	ttctgtatt	t gtctgaaa	aat ta g gg	ccaga ctg	ttaccac	tcccttaagt	960
ttgaccttag	gtaactgga	a agatgtc	gag cggct	cgctc aca	accagtc	ggtagatgtc	1020
aagaagagac	gttgggtta	c cttctgc	ct gcaga	atggc caa	cctttaa	cgtcggatgg	1080
ccgcgagacg	gcaccttta	a ccgagaco	ctc atcac	ccagg tta	agatcaa	ggtcttttca	1140
cctggcccgc	atggacacc	c agaccage	gtc cccta	catcg tga	cctggga	agccttggct	1200
tttgaccccc	ctccctggg	t caagecet	tt gtaca	cccta agc	ctccgcc	tcctcttcct	1260
ccatccgccc	cgtctctcc	c ccttgaad	ect cctcg	ttcga ccc	egeeteg	atcctccctt	1320
tatccagccc	tcactcctt	c tctaggc	gcc ggccg	ctcta gcc	cattaat	acgactcact	1380
atagggcgat	tcgaatcag	g ccttggc	jcg ccgga	tcctt aat	taagcgc	aattgggagg	1440
tggcggtagc	ctcgag at Me 1	g ggc gtg t Gly Val	att acg Ile Thr	gat tca c Asp Ser L	tg gcc g eu Ala V 1	al Val Ala	1492
cgc acc gat Arg Thr Asp 15	cgc cct Arg Pro	tcc caa ca Ser Gln Gl 20	n Leu Ar	c agc ctg g Ser Leu	aat ggc Asn Gly 25	gaa tgg Glu Trp	1540
cgc ttt gcc Arg Phe Ala 30	tgg ttt Trp Phe	ccg gca co Pro Ala Pi 35	ca gaa gc co Glu Al	g gtg ccg a Val Pro 40	gaa agc Glu Ser	tgg ctg Trp Leu	1588
gag tgc gat Glu Cys Asp 45	Leu Pro	gag gcc ga Glu Ala As 50	sp Thr Va	l Val Val	Pro Ser	aac tgg Asn Trp 60	1636
cag atg cac Gln Met His	ggt tac Gly Tyr 65	gat gcg co Asp Ala Pi	cc atc ta to Ile Ty 70	c acc aac r Thr Asn	gtg acc Val Thr	tat ccc Tyr Pro 75	1684
att acg gto Ile Thr Val	aat ccg Asn Pro 80	ccg ttt gt Pro Phe Va	t ccc ac al Pro Th 85	g gag aat r Glu Asn	ccg acg Pro Thr 90	ggt tgt Gly Cys	1732
tac tcg ctc Tyr Ser Leu 95	aca ttt Thr Phe	aat gtt ga Asn Val As 10	sp Glu Se	c tgg cta r Trp Leu	cag gaa Gln Glu 105	ggc cag Gly Gln	1780

acg Thr	cga Arg 110	att Ile	att Ile	ttt Phe	gat Asp	ggc Gly 115	gtt Val	aac Asn	tcg Ser	gcg Ala	ttt Phe 120	cat His	ctg Leu	tgg Trp	tgc Cys	1828
aac Asn 125	GJÀ aàà	cgc Arg	tgg Trp	gtc Val	ggt Gly 130	tac Tyr	ggc Gly	cag Gln	gac Asp	agt Ser 135	cgt Arg	ttg Leu	ccg Pro	tct Ser	gaa Glu 140	1876
ttt Phe	gac Asp	ctg Leu	agc Ser	gca Ala 145	ttt Phe	tta Leu	cgc Arg	gcc Ala	gga Gly 150	gaa Glu	aac Asn	cgc Arg	ctc Leu	gcg Ala 155	gtg Val	1924
atg Met	gtg V al	ctg Leu	cgc Arg 160	tgg Trp	agt Ser	gac Asp	ggc Gly	agt Ser 165	tat Tyr	ctg Leu	g aa Glu	gat Asp	cag Gln 170	gat Asp	atg Met	1972
tgg Trp	cgg Arg	atg Met 175	agc Ser	ggc Gly	att Ile	ttc Phe	cgt Arg 180	gac Asp	gtc Val	tcg Ser	ttg Leu	ctg Leu 185	cat His	aa a Lys	ccg Pro	2020
act Thr	aca Thr 190	caa Gln	atc Ile	agc Ser	gat Asp	ttc Phe 195	cat His	gtt Val	gcc Ala	act Thr	cgc Arg 200	ttt Phe	aat Asn	gat Asp	gat Asp	2068
ttc Phe 205	agc Ser	cgc Arg	gct Ala	gta Val	ctg Leu 210	gag Glu	gct Ala	gaa Glu	gtt Val	cag Gln 215	atg Met	tgc Cys	ggc Gly	gag Glu	ttg Leu 220	2116
egt Arg	gac Asp	tac Tyr	cta Leu	cgg Arg 225	gta Val	aca Thr	gtt Val	tct Ser	tta Leu 230	tgg Trp	cag Gln	ggt Gly	gaa Glu	acg Thr 235	cag Gln	2164
gtc Val	gcc Ala	agc Ser	ggc Gly 240	acc Thr	gcg Ala	cct Pro	ttc Phe	ggc Gly 245	ggt Gly	gaa Glu	att Ile	atc Ile	gat Asp 250	gag .Glu	cgt Arg	2212
ggt Gly	ggt Gly	tat Tyr 255	gcc Ala	gat Asp	cgc Arg	gtc Val	aca Thr 260	cta Leu	cgt Arg	ctg Leu	aac Asn	gtc Val 265	gaa Glu	aac Asn	ccg Pro	2260
aaa Lys	ctg Leu 270	tgg Trp	agc Ser	gcc Ala	gaa Glu	atc Ile 275	ccg Pro	aat Asn	ctc Leu	tat Tyr	cgt Arg 280	gcg Ala	gtg Val	gtt V a l	gaa Glu	2308
ctg Leu 285	cac His	acc Thr	gcc Ala	gac Asp	ggc Gly 290	acg Thr	ctg Leu	att Ile	gaa Glu	gca Ala 295	gaa Glu	gcc Ala	tgc Cys	gat Asp	gtc Val 300	2356
ggt Gly	ttc Phe	cgc Arg	gag Glu	gtg Val 305	cgg Arg	att Ile	gaa Glu	a at Asn	ggt Gly 310	ctg Leu	ctg Leu	ctg Leu	ctg Leu	aac Asn 315	ggc Gly	2404
aag Lys	ccg Pro	ttg Leu	ctg Leu 320	att Ile	cga Arg	ggc Gly	gtt Val	aac Asn 325	cgt Arg	cac His	gag Glu	cat His	cat His 330	cct Pro	ctg Leu	2452
cat	ggt	cag	gtc	atg	gat	gag	cag	acg	atg	gtg	cag	gat	atc	ctg	ctg	2500

His	Gly	Gln 335	Val	Met	Asp	Glu	Gln 340	Thr	Met	Val	Gln	Asp 345	Ile	Leu	Leu	
atg Met	aag Lys 350	cag Gln	aac Asn	aac Asn	ttt Phe	aac Asn 355	gc c Ala	gtg Val	cgc Arg	tgt Cys	tcg Ser 360	cat His	tat Tyr	ccg Pro	aac Asn	2548
cat His 365	ccg Pro	ctg Leu	tgg Trp	tac Tyr	acg Thr 370	ctg Leu	tgc Cys	gac Asp	cgc Arg	tac Tyr 375	ggc Gly	ctg Leu	tat Tyr	gtg Val	gtg Val 380	2596
gat Asp	gaa Glu	gcc Ala	aat Asn	att Ile 385	gaa Glu	acc Thr	cac His	ggc Gly	atg Met 390	gtg Val	cca Pro	atg Met	aat Asn	cgt Arg 395	ctg Leu	2644
acc Thr	gat Asp	gat Asp	ccg Pro 400	cgc Arg	tgg Trp	cta Leu	ccg Pro	gcg Ala 405	atg Met	agc Ser	gaa Glu	cgc Arg	gta Val 410	acg Thr	cga Arg	2692
atg Met	gtg Val	cag Gln 415	cgc Arg	gat Asp	cgt Arg	aat Asn	cac His 420	ccg Pro	agt Ser	gtg Val	atc Ile	atc Ile 425	tgg Trp	tcg Ser	ctg Leu	2740
ggg	aat Asn 430	gaa Glu	tca Ser	ggc Gly	cac His	ggc Gly 435	gct Ala	aat Asn	cac His	gac Asp	gcg Ala 440	ctg Leu	tat Tyr	cgc Arg	tgg Trp	2788
atc Ile 445	aaa Lys	tct Ser	gtc Val	gat Asp	cct Pro 450	tcc Ser	cgc Arg	ccg Pro	gtg Val	cag Gln 455	tat Tyr	gaa Glu	ggc Gly	ggc Gly	gga Gly 460	2836
gcc Ala	gac Asp	acc Thr	acg Thr	gcc Ala 465	acc Thr	gat Asp	att Ile	att Ile	tgc Cys 470	ccg Pro	atg Met	tac Tyr	gcg Ala	cgc Arg 475	gtg Val	2884
gat Asp	gaa Glu	gac Asp	cag Gln 480	ccc Pro	ttc Phe	ccg Pro	gct Ala	gtg Val 485	ccg Pro	aaa Lys	tgg Trp	tcc Ser	atc Ile 490	aaa Lys	aaa Lys	2932
tgg Trp	ctt Leu	tcg Ser 495	cta Leu	cct Pro	gga Gly	gag Glu	acg Thr 500	cgc Arg	ccg Pro	ctg Leu	atc Ile	ctt Leu 505	tgc Cys	gaa Glu	tac Tyr	2980
	cac His 510															3028
gcg Ala 525	ttt Phe	cgt Arg	cag Gln	tat Tyr	ccc Pro 530	cgt Arg	tta Leu	cag Gln	ggc Gly	ggc Gly 535	ttc Phe	gtc Val	tgg Trp	gac Asp	tgg Trp 540	3076
gtg Val	gat Asp	cag Gln	tcg Ser	ctg Leu 545	att Ile	aaa Lys	tat T yr	gat Asp	gaa Glu 550	aac Asn	ggc Gly	aac Asn	ccg Pro	tgg Trp 555	tcg Ser	3124
	tac Tyr															3172

Page 4

Ç	560	565		570
atg aac ggt o Met Asn Gly I 575	ctg gtc ttt (Leu Val Phe <i>l</i>	gcc gac cgc Ala Asp Arg 580	acg ccg cat cca Thr Pro His Pro 585	gcg ctg acg 3220 Ala Leu Thr
gaa gca aaa d Glu Ala Lys F 590	His Gln Gln (cag ttt ttc Gln Phe Phe 595	cag ttc cgt tta Gln Phe Arg Leu 600	tcc ggg caa 3268 Ser Gly Gln
acc atc gaa g Thr Ile Glu V 605	gtg acc agc o Val Thr Ser 0 610	gaa tac ctg Glu Tyr Leu	ttc cgt cat agc Phe Arg His Ser 615	gat aac gag 3316 Asp Asn Glu 620
ctc ctg cac t Leu Leu His T	igg atg gtg g Irp Met Val A 625	gcg ctg gat Ala Leu Asp	ggt aag ccg ctg Gly Lys Pro Leu 630	gca agc ggt 3364 Ala Ser Gly 635
Glu Val Pro I	ctg gat gtc g Leu Asp Val <i>F</i> 540	gct cca caa Ala Pro Gln 645	ggt aaa cag ttg Gly Lys Gln Leu	att gaa ctg 3412 Ile Glu Leu 650
cct gaa cta c Pro Glu Leu E 655	ccg cag ccg c Pro Gln Pro G	gag agc gcc Glu Ser Ala 660	ggg caa ctc tgg Gly Gln Leu Trp 665	ctc aca gta 3460 Leu Thr Val
cgc gta gtg c Arg Val Val 6 670	Gln Pro Asn A	gcg acc gca Ala Thr Ala 675	tgg tca gaa gcc Trp Ser Glu Ala 680	ggg cac atc 3508 Gly His Ile
agc gcc tgg c Ser Ala Trp 6 685	cag cag tgg c Gln Gln Trp A 690	cgt ctg gcg Arg Leu Ala	gaa aac ctc agt Glu Asn Leu Ser 695	gtg acg ctc 3556 Val Thr Leu 700
ccc gcc gcg t Pro Ala Ala S	ccc cac gcc a Ser His Ala I 705	atc ccg cat [le Pro His	ctg acc acc agc Leu Thr Thr Ser 710	gaa atg gat 3604 Glu Met Asp 715
Phe Cys Ile G	gag ctg ggt a Glu Leu Gly A 120	aat aag cgt Asn Lys Arg 725	tgg caa ttt aac Trp Gln Phe Asn	cgc cag tca 3652 Arg Gln Ser 730
ggc ttt ctt t Gly Phe Leu S 735	ca cag atg t Ser Gln Met T	igg att ggc Trp Ile Gly 740	gat aaa aaa caa Asp Lys Lys Gln 745	ctg ctg acg 3700 Leu Leu Thr
ccg ctg cgc g Pro Leu Arg A 750	Asp Gln Phe T	acc cgt gca Thr Arg Ala 755	ccg ctg gat aac Pro Leu Asp Asn 760	gac att ggc 3748 Asp Ile Gly
gta agt gaa g Val Ser Glu A 765	gcg acc cgc a la Thr Arg I 770	att gac cct [le Asp Pro	aac gcc tgg gtc Asn Ala Trp Val 775	gaa cgc tgg 3796 Glu Arg Trp 780
aag gcg gcg g Lys Ala Ala G	ggc cat tac c Gly His Tyr G 785	cag gcc gaa Gln Ala Glu	gca gcg ttg ttg Ala Ala Leu Leu 790	cag tgc acg 3844 Gln Cys Thr 795

Page 5

gca Ala	gat Asp	aca Thr	ctt Leu 800	gct Ala	gat Asp	gcg Ala	gtg Val	ctg Leu 805	att Ile	acg Thr	acc Thr	gct Ala	cac His 810	gcg Ala	tgg Trp	3892
cag Gln	cat His	cag Gln 815	ggg Gly	aaa Lys	acc Thr	tta Leu	ttt Phe 820	atc Ile	agc Ser	cgg Arg	aaa Lys	acc Thr 825	tac Tyr	cgg Arg	att Ile	3940
gat Asp	ggt Gly 830	agt Ser	ggt Gly	caa Gln	atg Met	gcg Ala 835	att Ile	acc Thr	gtt Val	gat Asp	gtt Val 840	gaa Glu	gtg Val	gcg Ala	agc Ser	3988
gat Asp 845	aca Thr	ccg Pro	cat His	ccg Pro	gcg Ala 850	cgg Arg	att Ile	ggc Gly	ctg Leu	aac Asn 855	tgc Cys	cag Gln	ctg Leu	gcg Ala	cag Gln 860	4036
gta Val	gca Ala	gag Glu	cgg Arg	gta Val 865	aac Asn	tgg Trp	ctc Leu	gga Gly	tta Leu 870	ggg Gly	ccg Pro	caa Gln	gaa Glu	aac Asn 875	tat Tyr	4084
		cgc Arg														4132
tca Ser	gac Asp	atg Met 895	tat Tyr	acc Thr	ccg Pro	tac Tyr	gtc Val 900	ttc Phe	ccg Pro	agc Ser	gaa Glu	aac Asn 905	ggt Gly	ctg Leu	cgc Arg	4180
tgc Cys	ggg Gly 910	acg Thr	cgc Arg	gaa Glu	ttg Leu	aat Asn 915	tat Tyr	ggc Gly	cca Pro	cac His	cag Gln 920	tgg Trp	cgc Arg	ggc Gly	gac Asp	4228
		ttc Phe														4276
		cgc Arg														4324
		ttc Phe														4372
gta Val	tcg Ser	gcg Ala 975	gaa Glu	ttc Phe	cag Gln	ctg Leu	agc Ser 980	gcc Ala	ggt Gly	cgc Arg	tac Tyr	cat His 985	tac Tyr	cag Gln	ttg Leu	4420
gtc Val	tgg Trp 990	tgt Cys	caa Gln	aaa Lys	aga Arg	tct Ser 995	gac Asp	tat Tyr	aaa Lys	gat Asp	gag Glu 1000	Ası	c cto p Lei	c gad ı Asp	c cat o His	4468
cat His 100	Hi	t car s Hi				g	aataa	atago	g ta	gataa	agtg	acto	gatta	aga		4516
tgc	attg	atc	cctc	gacc	aa ti	tccg	gtta [.]	t tt:	cca	ccat	att	gccg	tct 1	ttg	gcaatg	4576

tgagggcccg	gaaacctggc	cctgtcttct	tgacgagcat	tcctaggggt	ctttcccctc	4636
tcgccaaagg	aatgcaaggt	ctgttgaatg	tcgtgaagga	agcagttcct	ctggaagctt	4696
cttgaagaca	aacaacgtct	gtagcgaccc	tttgcaggca	gcggaacccc	ccacctggcg	4756
acaggtgcct	ctgcggccaa	aagccacgtg	tataagatac	acctgcaaag	gcggcacaac	4816
cccagtgcca	cgttgtgagt	tggatagttg	tggaaagagt	caaatggctc	tcctcaagcg	4876
tattcaacaa	ggggctgaag	gatgcccaga	aggtacccca	ttgtatggga	tctgatctgg	4936
ggcctcggtg	cacatgcttt	acatgtgttt	agtcgaggtt	aaaaaacgtc	taggcccccc	4996
gaaccacggg	gacgtggttt	tcctttgaaa	aacacgatga	taataccatg	attgaacaag	5056
atggattgca	cgcaggttct	ccggccgctt	gggtggagag	gctattcggc	tatgactggg	5116
cacaacagac	aatcggctgc	tctgatgccg	ccgtgttccg	gctgtcagcg	caggggcgcc	5176
cggttctttt	tgtcaagacc	gacctgtccg	gtgccctgaa	tgaactgcag	gacgaggcag	5236
cgcggctatc	gtggctggcc	acgacgggcg	ttccttgcgc	agctgtgctc	gacgttgtca	5296
ctgaagcggg	aagggactgg	ctgctattgg	gcgaagtgcc	ggggcaggat	ctcctgtcat	5356
ctcaccttgc	tcctgccgag	aaagtatcca	·tcatggctga	tgcaatgcgg	cggctgcata	5416
cgcttgatcc	ggctacctgc	ccattcgacc	accaagcgaa	acatcgcatc	gagcgagcac	5476
gtactcggat	ggaagccggt	cttgtcgatc	aggatgatct	ggacgaagag	catcaggggc	5536
tcgcgccagc	cgaactgttc	gccaggctca	aggcgcgcat	gcccgacggc	gaggatctcg	5596
tcgtgaccca	tggcgatgcc	tgcttgccga	atatcatggt	ggaaaatggc	cgcttttctg	5656
gattcatcga	ctgtggccgg	ctgggtgtgg	cggaccgcta	tcaggacata	gcgttggcta	5716
cccgtgatat	tgctgaagag	cttggcggcg	aatgggctga	ccgcttcctc	gtgctttacg	5776
gtatcgccgc	tcccgattcg	cagcgcatcg	ccttctatcg	ccttcttgac	gagttcttct	5836
gagcgggact	ctggggttcg	catcgataaa	ataaaagatt	ttatttagtc	tccagaaaaa	5896
ggggggaatg	aaagacccca	cctgtaggtt	tggcaagcta	gcttaagtaa	cgccattttg	5956
caaggcatgg	aaaaatacat	aactgagaat	agagaagttc	agatcaaggt	caggaacaga	6016
tggaacagct	gaatatgggc	caaacaggat	atctgtggta	agcagttcct	gccccggctc	6076
agggccaaga	acagatggaa	cagctgaata	tgggccaaac	aggatatctg	tggtaagcag	6136
ttcctgcccc	ggctcagggc	caagaacaga	tggtccccag	atgcggtcca	gccctcagca	6196
gtttctagag	aaccatcaga	tgtttccagg	gtgccccaag	gacctgaaat	gaccctgtgc	6256
cttatttgaa	ctaaccaatc	agttcgcttc	tcgcttctgt	tcgcgcgctt	ctgctccccg	6316

agctcaataa	aagagcccac	aacccctcac	tcggggcgcc	agtcctccga	ttgactgagt	6376
cgcccgggta	cccgtgtatc	caataaaccc	tcttgcagtt	gcatccgact	tgtggtctcg	6436
ctgttccttg	ggagggtctc	ctctgagtga	ttgactaccc	gtcagcgggg	gtctttcatt	6496
catgcagcat	gtatcaaaat	taatttggtt	ttttttctta	agtatttaca	ttaaatggcc	6556
atagttgcat	taatgaatcg	gccaacgcgc	ggggagaggc	ggtttgcgta	ttggcgctct	6616
tccgcttcct	cgctcactga	ctcgctgcgc	tcggtcgttc	ggctgcggcg	agcggtatca	6676
gctcactcaa	aggcggtaat	acgg				6700

<210> 2

<211> 1010 <212> PRT <213> Unknown

<220>

<223> pICAST ALC.

<400> 2

Met Gly Val Ile Thr Asp Ser Leu Ala Val Val Ala Arg Thr Asp Arg

Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp

Phe Pro Ala Pro Glu Ala Val Pro Glu Ser Trp Leu Glu Cys Asp Leu

Pro Glu Ala Asp Thr Val Val Pro Ser Asn Trp Gln Met His Gly 55 50 60

Tyr Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn 65 70 75 80

Pro Pro Phe Val Pro Thr Glu Asn Pro Thr Gly Cys Tyr Ser Leu Thr 85 90

Phe Asn Val Asp Glu Ser Trp Leu Gln Glu Gly Gln Thr Arg Ile Ile

Phe Asp Gly Val Asn Ser Ala Phe His Leu Trp Cys Asn Gly Arg Trp 115 120 125

Val Gly Tyr Gly Gln Asp Ser Arg Leu Pro Ser Glu Phe Asp Leu Ser 130 135 140

Ala Phe Leu Arg Ala Gly Glu Asn Arg Leu Ala Val Met Val Leu Arg 145 150 155 160

Trp Ser Asp Gly Ser Tyr Leu Glu Asp Gln Asp Met Trp Arg Met Ser 165 170 175

Gly Ile Phe Arg Asp Val Ser Leu Leu His Lys Pro Thr Thr Gln Ile 180 185 190

Ser Asp Phe His Val Ala Thr Arg Phe Asn Asp Asp Phe Ser Arg Ala 195 200 205

Val Leu Glu Ala Glu Val Gln Met Cys Gly Glu Leu Arg Asp Tyr Leu 210 215 220

Arg Val Thr Val Ser Leu Trp Gln Gly Glu Thr Gln Val Ala Ser Gly 225 230 235 240

Thr Ala Pro Phe Gly Gly Glu Ile Ile Asp Glu Arg Gly Gly Tyr Ala 245 250 255

Asp Arg Val Thr Leu Arg Leu Asn Val Glu Asn Pro Lys Leu Trp Ser 260 265 270

Ala Glu Ile Pro Asn Leu Tyr Arg Ala Val Val Glu Leu His Thr Ala $275 \hspace{1.5cm} 280 \hspace{1.5cm} 285$

Asp Gly Thr Leu Ile Glu Ala Glu Ala Cys Asp Val Gly Phe Arg Glu 290 295 300

Val Arg Ile Glu Asn Gly Leu Leu Leu Leu Asn Gly Lys Pro Leu Leu 305 310 315 320

Ile Arg Gly Val Asn Arg His Glu His His Pro Leu His Gly Gln Val 325 330 335

Met Asp Glu Gln Thr Met Val Gln Asp Ile Leu Leu Met Lys Gln Asn 340 345

Asn Phe Asn Ala Val Arg Cys Ser His Tyr Pro Asn His Pro Leu Trp

355 360 ₃	3 6	5		
----------------------	-----	---	--	--

Arg Trp Leu Pro Ala Met Ser Glu Arg Val Thr Arg Met Val Gln Arg
405 410 415

Asp Arg Asn His Pro Ser Val Ile Ile Trp Ser Leu Gly Asn Glu Ser 420 425 430

Gly His Gly Ala Asn His Asp Ala Leu Tyr Arg Trp Ile Lys Ser Val 435 440 445

Asp Pro Ser Arg Pro Val Gln Tyr Glu Gly Gly Gly Ala Asp Thr Thr 450 455 460

Ala Thr Asp Ile Ile Cys Pro Met Tyr Ala Arg Val Asp Glu Asp Gln 465 470 475 480

Pro Phe Pro Ala Val Pro Lys Trp Ser Ile Lys Lys Trp Leu Ser Leu 485 490 495

Pro Gly Glu Thr Arg Pro Leu Ile Leu Cys Glu Tyr Ala His Ala Met 500 505 510

Gly Asn Ser Leu Gly Gly Phe Ala Lys Tyr Trp Gln Ala Phe Arg Gln 515 520 525

Tyr Pro Arg Leu Gln Gly Gly Phe Val Trp Asp Trp Val Asp Gln Ser 530 540

Leu Ile Lys Tyr Asp Glu Asn Gly Asn Pro Trp Ser Ala Tyr Gly Gly 545 550 560

Asp Phe Gly Asp Thr Pro Asn Asp Arg Gln Phe Cys Met Asn Gly Leu 565 570

Val Phe Ala Asp Arg Thr Pro His Pro Ala Leu Thr Glu Ala Lys His 580 585 590

- Gln Gln Phe Phe Gln Phe Arg Leu Ser Gly Gln Thr Ile Glu Val 595 600 605
- Thr Ser Glu Tyr Leu Phe Arg His Ser Asp Asn Glu Leu Leu His Trp 610 615 620
- Met Val Ala Leu Asp Gly Lys Pro Leu Ala Ser Gly Glu Val Pro Leu 625 630 635
- Asp Val Ala Pro Gln Gly Lys Gln Leu Ile Glu Leu Pro Glu Leu Pro 645 650 655
- Gln Pro Glu Ser Ala Gly Gln Leu Trp Leu Thr Val Arg Val Val Gln 660 665 670
- Pro Asn Ala Thr Ala Trp Ser Glu Ala Gly His Ile Ser Ala Trp Gln 675 680 685
- Gln Trp Arg Leu Ala Glu Asn Leu Ser Val Thr Leu Pro Ala Ala Ser 690 695 700
- His Ala Ile Pro His Leu Thr Thr Ser Glu Met Asp Phe Cys Ile Glu 705 710 715 720
- Leu Gly Asn Lys Arg Trp Gln Phe Asn Arg Gln Ser Gly Phe Leu Ser 725 730 735
- Gln Met Trp Ile Gly Asp Lys Lys Gln Leu Leu Thr Pro Leu Arg Asp 740 745 750
- Gln Phe Thr Arg Ala Pro Leu Asp Asn Asp Ile Gly Val Ser Glu Ala $755 \hspace{1.5cm} 760 \hspace{1.5cm} 765$
- Thr Arg Ile Asp Pro Asn Ala Trp Val Glu Arg Trp Lys Ala Ala Gly 770 780
- His Tyr Gln Ala Glu Ala Ala Leu Leu Gln Cys Thr Ala Asp Thr Leu 785 790 795 800
- Ala Asp Ala Val Leu Ile Thr Thr Ala His Ala Trp Gln His Gln Gly 805 810 815

Lys Thr Leu Phe Ile Ser Arg Lys Thr Tyr Arg Ile Asp Gly Ser Gly 820 825 830

Gln Met Ala Ile Thr Val Asp Val Glu Val Ala Ser Asp Thr Pro His 835 840 845

Pro Ala Arg Ile Gly Leu Asn Cys Gln Leu Ala Gln Val Ala Glu Arg 850 855 860

Val Asn Trp Leu Gly Leu Gly Pro Gln Glu Asn Tyr Pro Asp Arg Leu 865 870 875 880

Thr Ala Ala Cys Phe Asp Arg Trp Asp Leu Pro Leu Ser Asp Met Tyr 885 890 895

Thr Pro Tyr Val Phe Pro Ser Glu Asn Gly Leu Arg Cys Gly Thr Arg 900 905 910

Glu Leu Asn Tyr Gly Pro His Gln Trp Arg Gly Asp Phe Gln Phe Asn 915 920 925

Ile Ser Arg Tyr Ser Gln Gln Gln Leu Met Glu Thr Ser His Arg His 930 940

Leu Leu His Ala Glu Glu Gly Thr Trp Leu Asn Ile Asp Gly Phe His 945 950 955 960

Met Gly Ile Gly Gly Asp Asp Ser Trp Ser Pro Ser Val Ser Ala Glu 965 970 975

Phe Gln Leu Ser Ala Gly Arg Tyr His Tyr Gln Leu Val Trp Cys Gln 980 985 990

Lys Arg Ser Asp Tyr Lys Asp Glu Asp Leu Asp His His His His 995 1000 1005

His Arg 1010

<210> 3 <211> 6700

<212> DNA

<213> Unknown

<220> <223> pICAST ALC.

<400> 3 gacgtcggac ttatacccgg tttgtcctat agacaccatt cgtcaaggac qqqqccqaqt 60 cccggttctt gtctaccttg tcgacttata cccggtttgt cctatagaca ccattcgtca 120 aggacggggc cgaqtcccqq ttcttqtcta ccaqqqqtct acqccaqqtc qqqaqtcqtc 180 aaagatetet tggtagteta caaaggteee acggggttee tggaetttae tgggaeacgg 240 aataaacttg attggttagt caagcgaaga gcgaagacaa gcgcgcgaag acgagggct 300 cgagttattt tctcgggtgt tggggagtga gccccgcggt caggaggcta actgactcag 360 cgggcccatg ggcacatagg ttatttggga gaacgtcaac gtaggctgaa caccagagcg 420 acaaggaacc ctcccagagg agactcacta actgatgggc agtcgccccc agaaagtaaa 480 cccccgagca ggccctagcc ctctggggac gggtccctgg tggctgggtg gtggcctcc 540 gttcgaccgg tcgttgaata gacacagaca ggctaacaga tcacagatac tgactaaaat 600 acgcggacgc agccatgatc aatcgattga tcgagacata gaccgcctgg gcaccacctt 660 gactgetcaa gacttgtggg ccggcgttgg gaccetctge agggteectg aaacceecgg 720 caaaaacacc gggctggact ccttccctca gctacacctt aggctgggc agtcctatac 780 840 accaagacca tectetgete ttggattttg teaagggegg aggeagactt aaaaacgaaa gccaaacctt ggcttcggcg cgcagaacag acgacgtcgt agcaagacac aacagagaca 900 960 gactgacaca aagacataaa cagactttta atcccggtct gacaatggtg agggaattca aactggaatc cattgacctt tctacagctc gccgagcgag tgttggtcag ccatctacag 1020 1080 ttcttctctg caacccaatg gaagacgaga cgtcttaccg gttggaaatt gcagcctacc 1140 ggcgctctgc cgtggaaatt ggctctggag tagtgggtcc aattctagtt ccagaaaagt ggaccgggcg tacctgtggg tctggtccag gggatgtagc actggaccct tcggaaccga 1200 aaactggggg gagggaccca gttcgggaaa catgtgggat tcggaggcgg aggagaagga 1260 qqtaqqcqqq qcaqaqqqq qgaacttqqa qqaqcaaqct qqqqcqqaqc taqqaqqqaa 1320 1380 ataggtcggg agtgaggaag agatccgcgg ccggcgagat cgggtaatta tgctgagtga tatcccgcta agcttagtcc ggaaccgcgc ggcctaggaa ttaattcgcg ttaaccctcc 1440 accgccatcg gagetetace egeactaatg cetaagtgae eggeageace gggegtgget 1500 agcgggaagg gttgtcaatg cgtcggactt accgcttacc gcgaaacgga ccaaaggccg 1560 tggtcttcgc cacggccttt cgaccgacct cacgctagaa ggactccggc tatgacagca 1620

gcaggggagt	ttgaccgtct	acgtgccaat	gctacgcggg	tagatgtggt	tgcactggat	1680
agggtaatgc	cagtta g gcg	gcaaacaagg	gtgcctctta	ggctgcccaa	caatgagcga	1740
gtgtaaatta	caactacttt	cgaccgatgt	ccttccggtc	tgcgcttaat	aaaaactacc	1800
gcaattgagc	cgcaaagtag	acaccacgtt	gcccgcgacc	cagccaatgc	cggtcctgtc	1860
agcaaacggc	agacttaaac	tggactcgcg	taaaaatgcg	cggcctcttt	tggcggagcg	1920
ccactaccac	gacgcgacct	cactgccgtc	aatagacctt	ctagtcctat	acaccgccta	1980
ctcgccgtaa	aaggcactgc	agagcaacga	cgtatttggc	tgatgtgttt	agtcgctaaa	2040
ggtacaacgg	tgagcgaaat	tactactaaa	gtcggcgcga	catgacctcc	gacttcaagt	2100
ctacacgccg	ctcaacgcac	tgatggatgc	ccattgtcaa	agaaataccg	tcccactttg	2160
cgtccagcgg	tcgccgtggc	gcggaaagcc	gccactttaa	tagctactcg	caccaccaat	2220
acggctagcg	cagtgtgatg	cagacttgca	gcttttgggc	tttgacacct	cgcggcttta	2280
gggcttagag	atagcacgcc	accaacttga	cgtgtggcgg	ctgccgtgcg	actaacttcg	2340
tcttcggacg	ctacagccaa	aggcgctcca	cgcctaactt	ttaccagacg	acgacgactt	2400
gccgttcggc	aacgactaag	ctccgcaatt	ggcagtgctc	gtagtaggag	acgtaccagt	2460
ccagtaccta	ctcgtctgct	accacgtcct	ataggacgac	tacttcgtct	tgttgaaatt	2520
gcggcacgcg	acaagcgtaa	taggcttggt	aggcgacacc	atgtgcgaca	cgctggcgat	2580
gccggacata	caccacctac	ttcggttata	actttgggtg	ccgtaccacg	gttacttagc	2640
agactggcta	ctaggcgcga	ccgatggccg	ctactcgctt	gcgcattgcg	cttaccacgt	2700
cgcgctagca	ttagtgggct	cacactagta	gaccagcgac	cccttactta	gtccggtgcc	2760
gcgattagtg	ctgcgcgaca	tagcgaccta	gtttagacag	ctaggaaggg	cgggccacgt	2820
catacttccg	ccgcctcggc	tgtggtgccg	gtggctataa	taaacgggct	acatgcgcgc	2880
gcacctactt	ctggtcggga	agggccgaca	cggctttacc	aggtagtttt	ttaccgaaag	2940
cgatggacct	ctctgcgcgg	gcgactagga	aacgcttatg	cgggtgcgct	acccattgtc	3000
agaacc g cca	aagcgattta	tgaccgtccg	caaagcagtc	ataggggcaa	atgtcccgcc	3060
gaagcagacc	ctgacccacc	tagtcagcga	ctaatttata	ctacttttgc	cgttgggcac	3120
cagccgaatg	ccgccactaa	aaccgctatg	cggcttgcta	gcggtcaaga	catacttgcc	3180
agaccagaaa	cggctggcgt	gcggcgtagg	tcgcgactgc	cttcgttttg	tggtcgtcgt	3240
caaaaaggtc	aaggcaaata	ggcccgtttg	gtagcttcac	tggtcgctta	tggacaaggc	3300
agtatcgcta	ttgctcgagg	acgtgaccta	ccaccgcgac	ctaccattcg	gcgaccgttc	3360

gccacttcac	ggagacctac	agcgaggtgt	tccatttgtc	aactaacttg	acggacttga	3420
tggcgtcggc	ctctcgcggc	ccgttgagac	cgagtgtcat	gcgcatcacg	ttggcttgcg	3480
ctggcgtacc	agtcttcggc	ccgtgtagtc	gcggaccgtc	gtcaccgcag	accgcctttt	3540
ggagtcacac	tgcgaggggc	ggcgcagggt	gcggtagggc	gtagactggt	ggtcgcttta	3600
cctaaaaacg	tagctcgacc	cattattcgc	aaccgttaaa	ttggcggtca	gtccgaaaga	3660
aagtgtctac	acctaaccgc	tattttttgt	tgacgactgc	ggcgacgcgc	tagtcaagtg	3720
ggcacgtggc	gacctattgc	tgtaaccgca	ttcacttcgc	tgggcgtaac	tgggattgcg	3780
gacccagctt	gcgaccttcc	gccgcccggt	aatggtccgg	cttcgtcgca	acaacgtcac	3840
gtgccgtcta	tgtgaacgac	tacgccacga	ctaatgctgg	cgagtgcgca	ccgtcgtagt	3900
ccccttttgg	aataaatagt	cggccttttg	gatggcctaa	ctaccatcac	cagtttaccg	3960
ctaatggcaa	ctacaacttc	accgctcgct	atgtggcgta	ggccgcgcct	aaccggactt	4020
gacggtcgac	cgcgtccatc	gtctcgccca	tttgaccgag	cctaatcccg	gcgttctttt	4080
gatagggctg	gcggaatgac	ggcggacaaa	actggcgacc	ctagacggta	acagtctgta	4140
catatggggc	atgcagaagg	gctcgctttt	gccagacgcg	acgccctgcg	cgcttaactt	4200
aataccgggt	gtggtcaccg	cgccgctgaa	ggtcaagttg	tagtcggcga	tgtcagttgt	4260
cgttgactac	ctttggtcgg	tagcggtaga	cgacgtgcgc	cttcttccgt	gtaccgactt	4320
atagctggca	aaggtatacc	cctaaccacc	gctgctgagg	acctcgggca	gtcatagccg	4380
ccttaaggtc	gactcgcggc	cagcgatggt	aatggtcaac	cagaccacag	ttttttctag	4440
actgatattt	ctactcctgg	agctggtagt	agtagtagta	gtggccatta	ttatccatct	4500
attcactgac	taatctacgt	aactagggag	ctggttaagg	ccaataaaag	gtggtataac	4560
ggcagaaaac	cgttacactc	ccgggccttt	ggaccgggac	agaagaactg	ctcgtaagga	4620
tccccagaaa	ggggagagcg	gtttccttac	gttccagaca	acttacagca	cttccttcgt	4680
caaggagacc	ttcgaagaac	ttctgtttgt	tgcagacatc	gctgggaaac	gtccgtcgcc	4740
ttggggggtg	gaccgctgtc	cacggagacg	ccggttttcg	gtgcacatat	tctatgtgga	4800
cgtttccgcc	gtgttggggt	cacggtgcaa	cactcaacct	atcaacacct	ttctcagttt	4860
accgagagga	gttcgcataa	gttgttcccc	gacttcctac	gggtcttcca	tggggtaaca	4920
taccctagac	tagaccccgg	agccacgtgt	acgaaatgta	cacaaatcag	ctccaatttt	4980
ttgcagatcc	ggggggcttg	gtgcccctgc	accaaaagga	aactttttgt	gctactatta	5040
tggtactaac	ttgttctacc	taacgtgcgt	ccaagaggcc	ggcgaaccca	cctctccgat	5100

aagccgatac	tgacccgtgt	tgtctgttag	ccgacgagac	tacggcggca	caaggccgac	5160
agtcgcgtcc	ccgcgggcca	agaaaaacag	ttctggctgg	acaggccacg	ggacttactt	5220
gacgtcctgc	tccgtcgcgc	cgatagcacc	gaccggtgct	gcccgcaagg	aacgcgtcga	5280
cacgagetge	aacagtgact	tcgcccttcc	ctgaccgacg	ataacccgct	tcacggcccc	5340
gtcctagagg	acagtagagt	ggaacgagga	cggctctttc	ataggtagta	ccgactacgt	5400
tacgccgccg	acgtatgcga	actaggccga	tggacgggta	agctggtggt	tcgctttgta	5460
gcgtagctcg	ctcgtgcatg	agcctacctt	cggccagaac	agctagtcct	actagacctg	552 0
cttctcgtag	tccccgagcg	cggtcggctt	gacaagcggt	ccgagttccg	cgcgtacggg	5580
ctgccgctcc	tagagcagca	ctgggtaccg	ctacggacga	acggcttata	gtaccacctt	5640
ttaccggcga	aaagacctaa	gtagctgaca	ccggccgacc	cacaccgcct	ggcgatagtc	5700
ctgtatcgca	accgatgggc	actataacga	cttctcgaac	cgccgcttac	ccgactggcg	5760
aaggagcacg	aaatgccata	gcggcgaggg	ctaagcgtcg	cgtagcggaa	gatagcggaa	5820
gaactgctca	agaagactcg	ccctgagacc	ccaagcgtag	ctattttatt	ttctaaaata	5880
aatcagaggt	ctttttcccc	ccttactttc	tggggtggac	atccaaaccg	ttcgatcgaa	5940
ttcattgcgg	taaaacgttc	cgtacctttt	tatgtattga	ctcttatctc	ttcaagtcta	6000
gttccagtcc	ttgtctacct	tgtcgactta	tacccggttt	gtcctataga	caccattcgt	6060
caaggacggg	gccgagtccc	ggttcttgtc	taccttgtcg	acttataccc	ggtttgtcct	6120
atagacacca	ttcgtcaagg	acggggccga	gtcccggttc	ttgtctacca	ggggtctacg	6180
ccaggtcggg	agtcgtcaaa	gatctcttgg	tagtctacaa	aggtcccacg	gggttcctgg	6240
actttactgg	gacacggaat	aaacttgatt	ggttagtcaa	gcgaagagcg	aagacaagcg	6300
cgcgaagacg	aggggctcga	gttattttct	cgggtgttgg	ggagtgagcc	ccgcggtcag	6360
gaggctaact	gactcagcgg	gcccatgggc	acataggtta	tttgggagaa	cgtcaacgta	6420
ggctgaacac	cagagcgaca	aggaaccctc	ccagaggaga	ctcactaact	gatgggcagt	6480
cgcccccaga	aagtaagtac	gtcgtacata	gttttaatta	aaccaaaaaa	aagaattcat	6540
aaatgtaatt	taccggtatc	aacgtaatta	cttagccggt	tgcgcgcccc	tctccgccaa	6600
acgcataacc	gcgagaaggc	gaaggagcga	gtgactgagc	gacgcgagcc	agcaagccga	6660
cgccgctcgc	catagtcgag	tgagtttccg	ccattatgcc			6700

<210> 4 <211> 8518 <212> DNA <213> Unknown <220> <223> pICAST ALN.

<400> 4

ctgcagcctg aatatgggcc aaacaggata tctgtggtaa gcagttcctg ccccggctca 60 gggccaagaa cagatggaac agctgaatat gggccaaaca ggatatctgt ggtaagcagt 120 teetgeeceg geteagggee aagaacagat ggteeceaga tgeggteeag ceeteageag 180 tttctagaga accatcagat gtttccaggg tgccccaagg acctgaaatg accetgtgcc 240 ttatttgaac taaccaatca gttcgcttct cgcttctgtt cgcgcgcttc tgctccccga 300 geteaataaa agageeeaca accegteact eggggegeea gteeteegat tqaetqaqte 360 gcccgggtac ccgtgtatcc aataaaccct cttgcagttg catccgactt gtggtctcgc 420 tgttccttgg gagggtctcc tctgagtgat tgactacccg tcagcqqqqq tctttcattt 480 gggggctcgt ccgggatcgg gagacccctg cccagggacc accgacccac caccgqqaqq 540 caagctggcc agcaacttat ctgtgtctgt ccgattgtct agtgtctatg actgatttta 600 tgcgcctgcg tcggtactag ttagctaact agctctgtat ctggcggacc cgtggtggaa 660 ctgacgagtt ctgaacaccc ggccgcaacc ctgggagacg tcccagggac tttgggggcc 720 gtttttgtgg cccgacctga ggaagggagt cgatgtggaa tccgaccccg tcaggatatq 780 tggttctggt aggagacgag aacctaaaac agttcccgcc tccgtctgaa tttttgcttt 840 eggtttggaa eegaageege gegtettgte tgetgeagea tegttetgtg ttgtetetgt 900 ctgactgtgt ttctgtattt gtctgaaaat tagggccaga ctgttaccac tcccttaagt 960 ttgaccttag gtaactggaa agatgtcgag cggctcgctc acaaccagtc ggtagatgtc 1020 aagaagagac gttgggttac cttctgctct gcagaatggc caacctttaa cgtcggatgg 1080 ccgcgagacg gcacctttaa ccgagacctc atcacccagg ttaagatcaa ggtcttttca 1140 cctggcccgc atggacaccc agaccaggtc ccctacatcg tgacctggga agccttggct 1200 tttgaccccc ctccctgggt caagcccttt gtacacccta agcctccgcc tcctcttcct 1260 ccatccgccc cgtctctccc ccttgaacct cctcgttcga ccccgcctcq atcctccctt 1320 tatecagece teacteette tetaggegee ggeegeteta geecattaat aegacteaet 1380 atagggcgat tcgaacacca tgcaccatca tcatcatcac gtcgactata aagatgagga 1440 ectegagatg ggcgtgatta cggattcact ggccgtcgtg gcccqcaccq atcgcccttc 1500

ccaacagtta	cgcagcctga	atggcgaatg	gcgctttgcc	tggtttccgg	caccagaagc	1560
ggtgccggaa	agctggctgg	agtgcgatct	tcctgaggcc	gatactgtcg	tcgtcccctc	1620
aaactggcag	atgcacggtt	acgatgcgcc	catctacacc	aacgtgacct	atcccattac	1680
ggtcaatccg	ccgtttgttc	ccacggagaa	tccgacgggt	tgttactcgc	tcacatttaa	1740
tgttgatgaa	agctggctac	aggaaggcca	gacgcgaatt	atttttgatg	gcgttaactc	1800
ggcgtttcat	ctgtggtgca	acgggcgctg	ggtcggttac	ggccaggaca	gtcgtttgcc	1860
gtctgaattt	gacctgagcg	catttttacg	cgccggagaa	aaccgcctcg	cggtgatggt	1920
gctgggctgg	agtgacggca	gttatctgga	agatcaggat	atgtggcgga	tgagcggcat	1980
tttccgtgac	gtctcgttgc	tgcataaacc	gactacacaa	atcagcgatt	tccatgttgc	2040
cactcgcttt	aatgatgatt	rcagccgcgc	tgtactggag	gctgaagttc	agatgtgcgg	2100
cgagttgcgt	gactacctac	gggtaacagt	ttctttatgg	cagggtgaaa	cgcaggtcgc	2160
cagcggcacc	gcgcctttcg	gcggtgaaat	tatcgatgag	cgtggtggtt	atgccgatcg	2220
cgtcacacta	cgtctgaacg	tcgaaaaccc	gaaactgtgg	agcgccgaaa	tcccgaatct	2280
ctatcgtgcg	gtggttgaac	tgcacaccgc	cgacggcacg	ctgattgaag	cagaagcctg	2340
cgatgtcggt	ttccgcgagg	tgcggattga	aaatggtctg	ctgctgctga	acggcaagcc	2400
gttgctgatt	cgaggcgtta	accgtcacga	gcatcatcct	ctgcatggtc	aggtcatgga	2460
tgagcagacg	atggtgcagg	atatcctgct	gatgaagcag	aacaacttta	acgccgtgcg	2520
ctgttcgcat	tatccgaacc	atccgctgtg	gtacacgctg	tgcgaccgct	acggcctgta	2580
tgtggtggat	gaagccaata	ttgaaaccca	cggcatggtg	ccaatgaatc	gtctgaccga	2640
tgatccgcgc	tggctaccgg	cgatgagcga	acgcgtaacg	cgaatggtgc	agcgcgatcg	2700
taatcacccg	agtgtgatca	tctggtcgct	g g ggaatga a	tcaggccacg	gcgctaatca	2760
cgacgcgctg	tatcgctgga	tcaaatctgt	cgatccttcc	cgcccggtgc	agtatgaagg	2820
cggcggagcc	gacaccacgg	ccaccgatat	tatttgcccg	atgtacgcgc	gcgtggatga	2880
agaccagccc	ttcccggctg	tgccgaaatg	gtccatcaaa	aaatggcttt	cgctacctgg	2940
agagacgcgc	ccgctgatcc	tttgcgaata	cgcccacgcg	atgggtaaca	gtcttggcgg	3000
tttcgctaaa	tactggcagg	cgtttcgtca	gtatccccgt	ttacagggcg	gcttcgtctg	3060
ggactgggtg	gatcagtcgc	tgattaaata	tgatgaaaac	ggcaacccgt	ggtcggctta	3120
cggcggtgat	tttggcgata	cgccgaacga	tegecagtte	tgtatgaacg	gtctggtctt	3180
tgccgaccgc	acgccgcatc	cagcgctgac	ggaagcaaaa	caccagcagc	agtttttcca	3240

gttccgttta	tccgggcaaa	ccatcgaagt	gaccagcgaa	tacctgttcc	gtcatagcga	3300
taacgagctc	ctgcactgga	tggtggcgct	ggatggtaag	ccgctggcaa	gcggtgaagt	3360
gcctctggat	gtcgctccac	aaggtaaaca	gttgattgaa	ctgcctgaac	taccgcagcc	3420
ggagagcgcc	gggcaactct	ggctcacagt	acgcgtagtg	caaccgaacg	cgaccgcatg	3480
gtcagaagcc	gggcacatca	gcgcctggca	gcagtggcgt	ctggcggaaa	acctcagtgt	3540
gacgctcccc	gccgcgtccc	acgccatccc	gcatctgacc	accagcgaaa	tggatttttg	3600
catcgagctg	ggtaataagc	gttggcaatt	taaccgccag	tcaggctttc	tttcacagat	3660
gtggattggc	gataaaaaac	aactgctgac	gccgctgcgc	gatcagttca	cccgtgcacc	3720
gctggataac	gacattggcg	taagtgaagc	gacccgcatt	gaccctaacg	cctgggtcga	3780
acgctggaag	gcggcgggcc	attaccaggc	cgaagcagcg	ttgttgcagt	gcacggcaga	3840
tacacttgct	gatgcggtgc	tgattacgac	cgctcacgcg	tggcagcatc	aggggaaaac	3900
cttatttatc	agccggaaaa	cctaccggat	tgatggtagt	ggtcaaatgg	cgattaccgt	3960
tgatgttgaa	gtggcgagcg	atacaccgca	tccggcgcgg	attggcctga	actgccagct	4020
ggcgcaggta	gcagagcggg	taaactggct	cggattaggg	ccgcaagaaa	actatcccga	4080
ccgccttact	gccgcctgtt	ttgaccgctg	ggatctgcca	ttgtcagaca	tgtatacccc	4140
gtacgtcttc	ccgagcgaaa	acggtctgcg	ctgcgggacg	cgcgaattga	attatggccc	4200
acaccagtgg	cgcggcgact	tccagttcaa	catcagccgc	tacagtcaac	agcaactgat	4260
ggaaaccagc	catcgccatc	tgctgcacgc	ggaagaaggc	acatggctga	atatcgacgg	4320
tttccatatg	gggattggtg	gcgacgactc	ctggagcccg	tcagtatcgg	cggaattcca	4380
gctgagcgcc	ggtcgctacc	attaccagtt	ggtctggtgt	caaaaaagat	ctggaggtgg	4440
tggcagcagg	ccttggcgcg	ccggatcctt	aattaacaat	tgaccggtaa	taataggtag	4500
ataagtgact	gattagatgc	attgatccct	cgaccaattc	cggttatttt	ccaccatatt	4560
gccgtctttt	ggcaatgtga	gggcccggaa	acctggccct	gtcttcttga	cgagcattcc	4620
taggggtctt	teceeteteg	ccaaaggaat	gcaaggtctg	ttgaatgtcg	tgaaggaagc	4680
agttcctctg	gaagcttctt	gaagacaaac	aacgtctgta	gcgacccttt	gcaggcagcg	4740
gaacccccca	cctggcgaca	ggtgcctctg	cggccaaaag	ccacgtgtat	aagatacacc	4800
tgcaaaggcg	gcacaacccc	agtgccacgt	tgtgagttgg	atagttgtgg	aaagagtcaa	4860
atggctctcc	tcaagcgtat	tcaacaaggg	gctgaaggat	gcccagaagg	taccccattg	4920
tatgggatct	gatctggggc	ctcggtgcac	atgctttaca	tgtgtttagt	cgaggttaaa	4980

aaacgtctag gcccccgaa ccacggggac gtggttttcc tttgaaaaac acgatgataa 5040 taccatgatt gaacaagatg gattgcacgc aggttctccg gccgcttggg tgqaqaggct 5100 attoggotat gactgggcac aacagacaat cggctgctct gatgccgccg tgttccqqct 5160 gtcagcgcag gggcgcccgg ttctttttgt caagaccgac ctgtccggtg ccctgaatga 5220 actgcaggac gaggcagcgc ggctatcgtg gctggccacg acgggcgttc cttgcgcagc 5280 tgtgctcgac gttgtcactg aagcgggaag ggactggctg ctattgggcg aagtgccggg 5340 gcaggatete etgteatete acettgetee tgeegagaaa gtateeatea tggetgatge 5400 aatgeggegg etgeataege ttgateegge taeetgeeea ttegaceaee aagegaaaea 5460 tegeategag egageaegta eteggatega ageeggtett gtegateagg atgatetgga 5520 cgaagagcat caggggctcg cgccagccga actgttcgcc aggctcaagg cgcgcatgcc 5580 cgacggcgag gatctcgtcg tgacccatgg cgatgcctgc ttgccgaata tcatggtgga 5640 aaatggccgc ttttctggat tcatcgactg tggccggctg ggtgtqgcgg accqctatca 5700 ggacatagcg ttggctaccc gtgatattgc tgaagagctt ggcggcgaat gggctgaccg 5760 cttcctcqtq ctttacqqta tcqccqctcc cqattcqcaq cqcatcqcct tctatcqcct 5820 5880 tottgacqaq ttottctgaq cqqqactctq qqqttcqcat cqataaaata aaaqatttta tttagtctcc agaaaaaggg gggaatgaaa gaccccacct gtaggtttgg caagctaget 5940 6000 taagtaacgc cattttgcaa ggcatggaaa aatacataac tgagaataga gaagttcaga tcaaggtcag gaacagatgg aacagctgaa tatgggccaa acaggatatc tgtggtaagc 6060 agttcctgcc ccggctcagg gccaagaaca gatggaacag ctgaatatgg gccaaacagg 6120 atatetqtqq taaqeaqtte etqeeecqqe teaqqqeeaa qaacaqatqq teeecaqatq 6180 cggtccagcc ctcagcagtt tctagagaac catcagatgt ttccagggtg ccccaaggac 6240 6300 ctgaaatgac cctgtgcctt atttgaacta accaatcagt tcgcttctcg cttctgttcg cgcgcttctg ctccccgagc tcaataaaag agcccacaac ccctcactcg gggcgccagt 6360 6420 cctccgattg actgagtcgc ccgggtaccc gtgtatccaa taaaccctct tgcagttgca teegacttqt qqteteqetq tteettqgga qqqteteete tqaqtqattq actacceqte 6480 agcqqqqqtc tttcattcat gcaqcatqta tcaaaattaa tttggttttt tttcttaagt 6540 atttacatta aatggccata gttgcattaa tgaatcggcc aacgcgcggg gagaggcggt 6600 ttgcgtattg gcgctcttcc gcttcctcgc tcactgactc gctgcgctcg gtcgttcggc 6660 tgcggcgagc ggtatcagct cactcaaagg cggtaatacg gttatccaca gaatcagggg 6720

ataacgcagg aaagaacatg	tgagcaaaag	gccagcaaaa	ggccaggaac	cgtaaaaagg	6780
ccgcgttgct ggcgtttttc	cataggctcc	gcccccctga	cgagcatcac	aaaaatcgac	6840
gctcaagtca gaggtggcga	aacccgacag	gactataaag	ataccaggcg	tttccccctg	6900
gaagctccct cgtgcgctct	cctgttccga	ccctgccgct	taccggatac	ctgtccgcct	6960
ttctcccttc gggaagcgtg	gcgctttctc	atagctcacg	ctgtaggtat	ctcagttcgg	7020
tgtaggtcgt tcgctccaag	ctgggctgtg	tgcacgaacc	ccccgttcag	cccgaccgct	7080
gcgccttatc cggtaactat	cgtcttgagt	ccaacccggt	aagacacgac	ttatcgccac	7140
tggcagcagc cactggtaac	aggattagca	gagcgaggta	tgtaggcggt	gctacagagt	7200
tcttgaagtg gtggcctaac	tacggctaca	ctagaagaac	agtatttggt	atctgcgctc	7260
tgctgaagcc agttaccttc	ggaaaaagag	ttggtagctc	ttgatccggc	aaacaaacca	7320
ccgctggtag cggtggtttt	tttgtttgca	agcagcagat	tacgcgcaga	aaaaaaggat	7380
ctcaagaaga tcctttgatc	ttttctacgg	ggtctgacgc	tcagtggaac	gaaaactcac	7440
gttaagggat tttggtcatg	agattatcaa	aaaggatctt	cacctagatc	cttttgcggc	7500
cgcaaatcaa tctaaagtat	atatgagtaa	acttggtctg	acagttacca	atgcttaatc	7560
agtgaggcac ctatctcagc	gatctgtcta	tttcgttcat	ccatagttgc	ctgactcccc	7620
gtcgtgtaga taactacgat	acgggagggc	ttaccatctg	gccccagtgc	tgcaatgata	7680
ccgcgagacc cacgctcacc	ggctccagat	ttatcagcaa	taaaccagcc	agccggaagg	7740
gccgagcgca gaagtggtcc	tgcaacttta	teegeeteca	tccagtctat	taattgttgc	7800
cgggaagcta gagtaagtag	ttcgccagtt	aatagtttgc	gcaacgttgt	tgccattgct	7860
acaggcatcg tggtgtcacg	ctcgtcgttt	ggtatggctt	cattcagctc	cggttcccaa	7920
cgatcaaggc gagttacatg	atcccccatg	ttgtgcaaaa	aagcggttag	ctccttcggt	7980
cctccgatcg ttgtcagaag	taagttggcc	gcagtgttat	cactcatggt	tatggcagca	8040
ctgcataatt ctcttactgt	catgccatcc	gtaagatgct	tttctgtgac	tggtgagtac	8100
tcaaccaagt cattctgaga	atagtgtatg	cggcgaccga	gttgctcttg	cccggcgtca	8160
atacgggata ataccgcgcc	acatagcaga	actttaaaag	tgctcatcat	tggaaaacgt	8220
tcttcggggc gaaaactctc	aaggatctta	ccgctgttga	gatccagttc	gatgtaaccc	8280
actogtgcac ccaactgatc	ttcagcatct	tttactttca	ccagcgtttc	tgggtgagca	8340
aaaacaggaa ggcaaaatgc	cgcaaaaaag	ggaataaggg	cgacacggaa	atgttgaata	8400
ctcatactct tcctttttca	atattattga	agcatttatc	agggttattg	tctcatgagc	8460

ggatacatat ttgaatgtat	ttagaaaaat	aaacaaatag	gggttccgcg	cacatttc	8518
<210> 5 <211> 8518 <212> DNA <213> Unknown					
<220> <223> piCAST ALN.					
<400> 5 gacgtcggac ttatacccgg	tttgtcctat	agacaccatt	cgtcaaggac	ggggccgagt	60
cccggttctt gtctaccttg	tcgacttata	cccggtttgt	cctatagaca	ccattcgtca	120
aggacggggc cgagtcccgg	ttcttgtcta	ccaggggtct	acgccaggtc	gggagtcgtc	180
aaagatetet tggtagteta	caaaggtccc	acggggttcc	tggactttac	tgggacacgg	240
aataaacttg attggttagt	caagcgaaga	gcgaagacaa	gcgcgcgaag	acgaggggct	300
cgagttattt tctcgggtgt	tggggagtga	gccccgcggt	caggaggcta	actgactcag	360
cgggcccatg ggcacatagg	ttatttggga	gaacgtcaac	gtaggctgaa	caccagagcg	420
acaaggaacc ctcccagagg	agactcacta	actgatgggc	agtcgccccc	agaaagtaaa	480
cccccgagca ggccctagcc	ctctggggac	gggtccctgg	tggctgggtg	gtggccctcc	540
gttcgaccgg tcgttgaata	gacacagaca	ggctaacaga	tcacagatac	tgactaaaat	600
acgeggaege agecatgate	aatcgattga	tcgagacata	gaccgcctgg	gcaccacctt	660
gactgctcaa gacttgtggg	ccggcgttgg	gaccctctgc	agggtccctg	aaacccccgg	720
caaaaacacc gggctggact	ccttccctca	gctacacctt	aggctggggc	agtcctatac	780
accaagacca tectetgete	ttggattttg	tcaagggcgg	aggcagactt	aaaaacgaaa	840
gccaaacctt ggcttcggcg	cgcagaacag	acgacgtcgt	agcaagacac	aacagagaca	900
gactgacaca aagacataaa	cagactttta	atcccggtct	gacaatggtg	agggaattca	960
aactggaatc cattgacctt	tctacagctc	gccgagcgag	tgttggtcag	ccatctacag	1020
ttcttctctg caacccaatg	gaagacgaga	cgtcttaccg	gttggaaatt	gcagcctacc	1080
ggcgctctgc cgtggaaatt	ggctctggag	tagtgggtcc	aattctagtt	ccagaaaagt	1140
ggaccgggcg tacctgtggg	tctggtccag	gggatgtagc	actggaccct	tcggaaccga	1200
aaactggggg gagggaccca	gttcgggaaa	catgtgggat	tcggaggcgg	aggagaagga	1260
ggtaggcggg gcagagaggg	ggaacttgga	ggagcaagct	ggggcggagc	taggagggaa	1320
ataggtcggg agtgaggaag	agatccgcgg	ccggcgagat	cgggtaatta	tgctgagtga	1380

tatcccgcta	agcttgtggt	acgtggtagt	agtagtagtg	cagctgatat	ttctactcct	1440
ggagctctac	ccgcactaat	gcctaagtga	ccggcagcac	cgggcgtggc	tagcgggaag	1500
ggttgtcaat	gcgtcggact	taccgcttac	cgcgaaacgg	accaaaggcc	gtggtcttcg	1560
ccacggcctt	tcgaccgacc	tcacgctaga	aggact c cgg	ctatgacagc	agcaggggag	1620
tttgaccgtc	tacgtgccaa	tgctacgcgg	gtagatgtgg	ttgcactgga	tagggtaatg	1680
ccagttaggc	ggcaaacaag	ggtgcctctt	aggctgccca	acaatgagcg	agtgtaaatt	1740
acaactactt	tcgaccgatg	tccttccggt	ctgcgcttaa	taaaaactac	cgcaattgag	1800
ccgcaaagta	gacaccacgt	tgcccgcgac	ccagccaatg	ccggtcctgt	cagcaaacgg	1860
cagacttaaa	ctggactcgc	gtaaaaatgc	gcggcctctt	ttggcggagc	gccactacca	1920
cgacgcgacc	tcactgccgt	caatagacct	tctagtccta	tacaccgcct	actcgccgta	1980
aaaggcactg	cagagcaacg	acgtatttgg	ctgatgtgtt	tagtcgctaa	aggtacaacg	2040
gtgagcgaaa	ttactactaa	agtcggcgcg	acatgacctc	cgacttcaag	tctacacgcc	2100
gctcaacgca	ctgatggatg	cccattgtca	aagaaatacc	gtcccacttt	gcgtccagcg	2160
gtcgccgtgg	cgcggaaagc	cgccacttta	atagctactc	gcaccaccaa	tacggctagc	2220
gcagtgtgat	gcagacttgc	agcttttggg	ctttgacacc	tcgcggcttt	agggcttaga	2280
gatagcacgc	caccaacttg	acgtgtggcg	gctgccgtgc	gactaacttc	gtcttcggac	2340
gctacagcca	aaggcgctcc	acgcctaact	tttaccagac	gacgacgact	tgccgttcgg	2400
caacgactaa	gctccgcaat	tggcagtgct	cgtagtagga	gacgtaccag	tccagtacct	2460
actcgtctgc	taccacgtcc	tataggacga	ctacttcgtc	ttgttgaaat	tgcggcacgc	2520
gacaagcgta	ataggcttgg	taggcgacac	catgtgcgac	acgctgg c ga	tgccggacat	2580
acaccaccta	cttcggttat	aactttgggt	gccgtaccac	ggttacttag	cagactggct	2640
actaggcgcg	accgatggcc	gctactcgct	tgcgcattgc	gcttaccacg	tcgcgctagc	2700
attagtgggc	tcacactagt	agaccagcga	ccccttactt	agtccggtgc	cgcgattagt	2760
gctgcgcgac	atagcgacct	agtttagaca	gctaggaagg	gcgggccacg	tcatacttcc	2820
gccgcctcgg	ctgtggtgcc	ggtggctata	ataaacgggc	tacatgcgcg	cgcacctact	2880
tctggtcggg	aagggccgac	acggctttac	caggtagttt	tttaccgaaa	gcgatggacc	2940
tctctgcgcg	ggcgactagg	aaacgcttat	gcgg g tg c gc	tacccattgt	cagaaccgcc	3000
aaagcgattt	atgaccgtcc	gcaaagcagt	cataggggca	aatgtcccgc	cgaagcagac	3060
cctgacccac	ctagtcagcg	actaatttat	actacttttg	ccgttgggca	ccagccgaat	3120

gccgccacta	aaaccgctat	gcggcttgct	agcggtcaag	acatacttgc	cagaccagaa	3180
acggctggcg	tgcggcgtag	gtcgcgactg	ccttcgtttt	gtggtcgtcg	tcaaaaaggt	3240
caaggcaaat	aggcccgttt	ggtagcttca	ctggtcgctt	atggacaagg	cagtatcgct	3300
attgctcgag	gacgtgacct	accaccgcga	cctaccattc	ggcgaccgtt	cgccacttca	3360
cggagaccta	cagcgaggtg	ttccatttgt	caactaactt	gacggacttg	atggcgtcgg	3420
cctctcgcgg	cccgttgaga	ccgagtgtca	tgcgcatcac	gttggcttgc	gctggcgtac	3480
cagtcttcgg	cccgtgtagt	cgcggaccgt	cgtcaccgca	gaccgccttt	tggagtcaca	3540
ctgcgagggg	cggcgcaggg	tgcggtaggg	cgtagactgg	tggtcgcttt	acctaaaaac	3600
gtagetegae	ccattattcg	caaccgttaa	attggcggtc	agtccgaaag	aaagtgtcta	3660
cacctaaccg	ctattttttg	ttgacgactg	cggcgacgcg	ctagtcaagt	gggcacgtgg	3720
cgacctattg	ctgtaaccgc	attcacttcg	ctgggcgtaa	ctgggattgc	ggacccagct	3780
tgcgaccttc	cgccgcccgg	taatggtccg	gcttcgtcgc	aacaacgtca	cgtgccgtct	3840
atgtgaacga	ctacgccacg	actaatgctg	gcgagtgcgc	accgtcgtag	tccccttttg	3900
gaataaatag	tcggcctttt	ggatggccta	actaccatca	ccagtttacc	gctaatggca	3960
actacaactt	caccgctcgc	tatgtggcgt	aggccgcgcc	taaccggact	tgacggtcga	4020
ccgcgtccat	cgtctcgccc	atttgaccga	gcctaatccc	ggcgttcttt	tgatagggct	4080
ggcggaatga	cggcggacaa	aactggcgac	cctagacggt	aacagtctgt	acatatgggg	4140
catgcagaag	ggctcgcttt	tgccagacgc	gacgccctgc	gcgcttaact	taataccggg	4200
tgtggtcacc	gcgccgctga	aggtcaagtt	gtagtcggcg	atgtcagttg	tcgttgacta	4260
cctttggtcg	gtagcggtag	acgacgtgcg	ccttcttccg	tgtaccgact	tatagctgcc	4320
aaaggtatac	ccctaaccac	cgctgctgag	gacctcgggc	agtcatagcc	gccttaaggt	4380
cgactcgcgg	ccagcgatgg	taatggtcaa	ccagaccaca	gttttttcta	gacctccacc	4440
accgtcgtcc	ggaaccgcgc	ggcctaggaa	ttaattgtta	actggccatt	attatccatc	4500
tattcactga	ctaatctacg	taactaggga	gctggttaag	gccaataaaa	ggtggtataa	4560
cggcagaaaa	ccgttacact	cccgggcctt	tg g accggga	cagaagaact	gctcgtaagg	4620
atccccagaa	aggggagagc	ggtttcctta	cgttccagac	aacttacagc	acttccttcg	4680
tcaaggagac	cttcgaagaa	cttctgtttg	ttgcagacat	cgctgggaaa	cgtccgtcgc	4740
cttggggggt	ggaccgctgt	ccacggagac	gccggttttc	ggtgcacata	ttctatgtgg	4800
acgtttccgc	cgtgttgggg	tcacggtgca	acactcaacc	tatcaacacc	tttctcagtt	4860

taccgagagg a	agttcgcata	agttgttccc	cgacttccta	cgggtcttcc	atggggtaac	4920
ataccctaga c	ctagaccccg	gagccacgtg	tacgaaatgt	acacaaatca	gctccaattt	4980
tttgcagatc c	ggggggctt	ggtgcccctg	caccaaaagg	aaactttttg	tgctactatt	5040
atggtactaa c	cttgttctac	ctaacgtgcg	tccaagaggc	cggcgaaccc	acctctccga	5100
taagccgata c	ctgacccgtg	ttgtctgtta	gccgacgaga	ctacggcggc	acaaggccga	5160
cagtcgcgtc c	ccgcgggcc	aagaaaaaca	gttctggctg	gacaggccac	gggacttact	5220
tgacgtcctg c	ctccgtcgcg	ccgatagcac	cgaccggtgc	tgcccgcaag	gaacgcgtcg	5280
acacgagetg c	caacagtgac	ttcgcccttc	cctgaccgac	gataacccgc	ttcacggccc	5340
cgtcctagag g	gacagtagag	tggaacgagg	acggctcttt	cataggtagt	accgactacg	5400
ttacgccgcc g	gacgtatgcg	aactaggccg	atggacgggt	aagctggtgg	ttcgctttgt	5460
agcgtagctc g	gctcgtgcat	gagcctacct	tcggccagaa	cagctagtcc	tactagacct	5520
gcttctcgta g	gtccccgagc	gcggtcggct	tgacaagcgg	tccgagttcc	gcgcgtacgg	5580
gctgccgctc c	ctagagcagc	actgggtacc	gctacggacg	aacggcttat	agtaccacct	5640
tttaccggcg a	aaagaccta	agtagctgac	accggccgac	ccacaccgcc	tggcgatagt	5700
cctgtatcgc a	accgatggg	cactataacg	acttctcgaa	ccgccgctta	cccgactggc	5760
gaaggagcac g	gaaatgccat	agcggcgagg	gctaagcgtc	gcgtagcgga	agatagcgga	5820
agaactgctc a	agaagactc	gccctgagac	cccaagcgta	gctattttat	tttctaaaat	5880
aaatcagagg t	ctttttccc	cccttacttt	ctggggtgga	catccaaacc	gttcgatcga	5940
attcattgcg g	gtaaaacgtt	ccgtaccttt	ttatgtattg	actcttatct	cttcaagtct	6000
agttccagtc c	cttgtctacc	ttgtcgactt	atacccggtt	tgtcctatag	acaccattcg	6060
tcaaggacgg g	gccgagtcc	cggttcttgt	ctaccttgtc	gacttatacc	cggtttgtcc	6120
tatagacacc a	attcgtcaag	gacggggccg	agtcccggtt	cttgtctacc	aggggtctac	6180
gccaggtcgg g	gagtcgtcaa	agatctcttg	gtagtctaca	aaggtcccac	ggggttcctg	6240
gactttactg g	ggacacggaa	taaacttgat	tggttagtca	agcgaagagc	gaagacaagc	6300
gcgcgaagac g	gaggggctcg	agttattttc	tcgggtgttg	gggagtgagc	cccgcggtca	6360
ggaggctaac t	gactcagcg	ggcccatggg	cacataggtt	atttgggaga	acgtcaacgt	6420
aggctgaaca c	ccagagcgac	aaggaaccct	cccagaggag	actcactaac	tgatgggcag	6480
togococcag a	aagtaagta	cgtcgtacat	agttttaatt	aaaccaaaaa	aaagaattca	6540
taaatgtaat t	taccggtat	caacgtaatt	acttagccgg	ttgcgcgccc	ctctccgcca	6600

aacgcataac	cgcgagaagg	cgaaggagcg	agtgactgag	cgacgcgagc	cagcaageeg	6660
acgccgctcg	ccatagtcga	gtgagtttcc	gccattatgc	caataggtgt	cttagtcccc	6720
tattgcgtcc	tttcttgtac	actcgttttc	cggtcgtttt	ccggtccttg	gcatttttcc	6780
ggcgcaacga	ccgcaaaaag	gtatccgagg	cggggggact	gctcgtagtg	tttttagctg	6840
cgagttcagt	ctccaccgct	ttgggctgtc	ctgatatttc	tatggtccgc	aaagggggac	6900
cttcgaggga	gcacgcgaga	ggacaaggct	gggacggcga	atggcctatg	gacaggcgga	6960
aagagggaag	cccttcgcac	cgcgaaagag	tatcgagtgc	gacatccata	gagtcaagcc	7020
acatccagca	agcgaggttc	gacccgacac	acgtgcttgg	ggggcaagtc	gggctggcga	7080
cgcggaatag	gccattgata	gcagaactca	ggttgggcca	ttctgtgctg	aatagcggtg	7140
accgtcgtcg	gtgaccattg	tcctaatcgt	ctcgctccat	acatccgcca	cgatgtctca	7200
agaacttcac	caccggattg	atgccgatgt	gatcttcttg	tcataaacca	tagacgcgag	7260
acgacttcgg	tcaatggaag	cctttttctc	aaccatcgag	aactaggccg	tttgtttggt	7320
ggcgaccatc	gccaccaaaa	aaacaaacgt	tcgtcgtcta	atgcgcgtct	ttttttccta	7380
gagttcttct	aggaaactag	aaaagatgcc	ccagactgcg	agtcaccttg	cttttgagtg	7440
caattcccta	aaaccagtac	tctaatagtt	tttcctagaa	gtggatctag	gaaaacgccg	7500
gcgtttagtt	agatttcata	tatactcatt	tgaaccagac	tgtcaatggt	tacgaattag	7560
tcactccgtg	gatagagtcg	ctagacagat	aaagcaagta	ggtatcaacg	gactgagggg	7620
cagcacatct	attgatgcta	tgccctcccg	aatggtagac	cggggtcacg	acgttactat	7680
ggcgctctgg	gtgcgagtgg	ccgaggtcta	aatagtcgtt	atttggtcgg	tcggccttcc	7740
cggctcgcgt	cttcaccagg	acgttgaaat	aggcggaggt	aggtcagata	attaacaacg	7800
gcccttcgat	ctcattcatc	aagcggtcaa	ttatcaaacg	cgttgcaaca	acggtaacga	7860
tgtccgtagc	accacagtgc	gagcagcaaa	ccataccgaa	gtaagtcgag	gccaagggtt	7920
gctagttccg	ctcaatgtac	tagggggtac	aacacgtttt	ttcgccaatc	gaggaagcca	7980
ggaggctagc	aacagtcttc	attcaaccgg	cgtcacaata	gtgagtacca	ataccgtcgt	8040
gacgtattaa	gagaatgaca	gtacggtagg	cattctacga	aaagacactg	accactcatg	8100
agttggttca	gtaagactct	tatcacatac	gccgctggct	caacgagaac	gggccgcagt	8160
tatgccctat	tatggcgcgg	tgtatcgtct	tgaaattttc	acgagtagta	accttttgca	8220
agaagccccg	cttttgagag	ttcctagaat	ggcgacaact	ctaggtcaag	ctacattggg	8280
tgagcacgtg	ggttgactag	aagtcgtaga	aaatgaaagt	ggtcgcaaag	acccactcgt	8340

·	
ttttgtcctt ccgttttacg gcgtttttc ccttattccc gctgtgcctt tacaacttat	8400
gagtatgaga aggaaaaagt tataataact tegtaaatag teecaataae agagtaeteg	8460
cctatgtata aacttacata aatcttttta tttgtttatc cccaaggcgc gtgtaaag	8518
<210> 6 <211> 8175 <212> DNA <213> Unknown	
<220> <223> picast omc.	
<400> 6 ctgcagcctg aatatgggcc aaacaggata tctgtggtaa gcagttcctg ccccggctca	60
gggccaagaa cagatggaac agctgaatat gggccaaaca ggatatctgt ggtaagcagt	120
tectgeceeg geteagggee aagaacagat ggteeecaga tgeggteeag eecteageag	180
tttctagaga accatcagat gtttccaggg tgccccaagg acctgaaatg accctgtgcc	240
ttatttgaac taaccaatca gttegettet egettetgtt egegegette tgeteeeega	300
gctcaataaa agagcccaca accectcact eggggegeca gteeteegat tgaetgagte	360
gcccgggtac ccgtgtatcc aataaaccct cttgcagttg catccgactt gtggtctcgc	420
tgttccttgg gaggytctcc tctgagtgat tgactacccg tcagcggggg tctttcattt	480
gggggctcgt ccgggatcgg gagacccctg cccagggacc accgacccac caccgggagg	540
caagetggee ageaacttat etgtgtetgt eegattgtet agtgtetatg aetgatttta	600
tgcgcctgcg tcggtactag ttagctaact agctctgtat ctggcggacc cgtggtggaa	660
ctgacgagtt ctgaacaccc ggccgcaacc ctgggagacg tcccagggac tttgggggcc	720
gtttttgtgg cccgacctga ggaagggagt cgatgtggaa tccgaccccg tcaggatatg	780
tggttctggt aggagacgag aacctaaaac agttcccgcc tccgtctgaa tttttgcttt	840
cggtttggaa ccgaagccgc gcgtcttgtc tgctgcagca tcgttctgtg ttgtctctgt	900
ctgactgtgt ttctgtattt gtctgaaaat tagggccaga ctgttaccac tcccttaagt	960
ttgaccttag gtaactggaa agatgtcgag cggctcgctc acaaccagtc ggtagatgtc	1020
aagaagagac gttgggttac cttctgctct gcagaatggc caacctttaa cgtcggatgg	1080
ccgcgagacg gcacctttaa ccgagacctc atcacccagg ttaagatcaa ggtcttttca	1140
cctggcccgc atggacaccc agaccaggtc ccctacatcg tgacctggga agccttggct	1200
tttgaccccc ctccctgggt caagcccttt gtacacccta agcctccgcc tcctcttcct	1260

ccatccgccc	cgtctctccc	ccttgaacct	cctcgttcga	ccccgcctcg	atcctccctt	1320
tatccagccc	tcactccttc	tctaggcgcc	ggccgctcta	gcccattaat	acgactcact	1380
atagggcgat	tcgaatcagg	ccttggcgcg	ccggatcctt	aattaagcgc	aattgggagg	1440
tggcggtagc	ctcgagatgg	gcgtgattac	ggattcactg	gccgtcgttt	tacaacgtcg	1500
tgactgggaa	aaccctggcg	ttacccaact	taatcgcctt	gcagcacatc	cccctttcgc	1560
cagctggcgt	aatagcgaag	aggcccgcac	cgatcgccct	tcccaacagt	tacgcagcct	1620
gaatggcgaa	tggcgctttg	cctggtttcc	ggcaccagaa	gcggtgccgg	aaagctggct	1680
ggagtgcgat	cttcctgagg	ccgatactgt	cgtcgtcccc	tcaaactggc	agatgcacgg	1740
ttacgatgcg	cccatctaca	ccaacgtgac	ctatcccatt	acggtcaatc	cgccgtttgt	1800
tcccacggag	aatccgacgg	gttgttactc	gctcacattt	aatgttgatg	aaagctggct	1860
acaggaaggc	cagacgcgaa	ttatttttga	tggcgttaac	tcggcgtttc	atctgtggtg	1920
caacgggcgc	tgggtcggtt	acggccagga	cagtcgtttg	ccgtctgaat	ttgacctgag	1980
cgcatttta	cgcgccggag	aaaaccgcct	cgcggtgatg	gtgctgcgct	ggagtgacgg	2040
cagttatctg	gaagatcagg	atatgtggcg	gatgagcggc	attttccgtg	acgtctcgtt	2100
gctgcataaa	ccgactacac	aaatcagcga	tttccatgtt	gccactcgct	ttaatgatga	2160
tttcagccgc	gctgtactgg	aggctgaagt	tcagatgtgc	ggcgagttgc	gtgactacct	2220
acgggtaaca	gtttctttat	ggcagggtga	aacgcaggtc	gccagcggca	ccgcgccttt	2280
cggcggtgaa	attatcgatg	agcgtggtgg	ttatgccgat	cgcgtcacac	tacgtctgaa	2340
cgtcgaaaac	ccgaaactgt	ggagcgccga	aatcccgaat	ctctatcgtg	cggtggttga	2400
actgcacacc	gccgacggca	cgctgattga	agcagaagcc	tgcgatgtcg	gtttccgcga	2460
ggtgcggatt	gaaaatggtc	tgctgctgct	gaacggcaag	ccgttgctga	ttcgaggcgt	2520
taaccgtcac	gagcatcatc	ctctgcatgg	tcaggtcatg	gatgagcaga	cgatggtgca	2580
ggatatcctg	ctgatgaagc	agaacaactt	taacgccgtg	cgctgttcgc	attatccgaa	2640
ccatccgctg	tggtacacgc	tgtgcgaccg	ctacggcctg	tatgtggtgg	atgaagccaa	2700
tattgaaacc	cacggcatgg	tgccaatgaa	tcgtctgacc	gatgatccgc	gctggctacc	2760
ggcgatgagc	gaacgcgtaa	cgc g aatggt	gcagcgcgat	cgtaatcacc	cgagtgtgat	2820
catctggtcg	ctggggaatg	aatcaggcca	cggcgctaat	cacgacgcgc	tgtatcgctg	2880
gatcaaatct	gtcgatcctt	cccgcccggt	gcagtatgaa	ggcggcggag	ccgacaccac	2940
ggccaccgat	attatttgcc	cgatgtacgc	gcgcgtggat	gaagaccagc	ccttcccggc	3000

tgtgccgaaa tggtccatca aaaaatggct ttcgctacct ggagagacgc gcccgctgat 3060 cctttgcgaa tacqcccacg cqatqqqtaa cagtcttqqc qqtttcqcta aatactqqca 3120 ggcgtttcgt cagtatcccc gtttacaggg cggcttcgtc tgggactggg tggatcagtc 3180 gctgattaaa tatgatgaaa acggcaaccc gtggtcggct tacggcggtg attttggcga 3240 tacgccgaac gatcgccagt tctgtatgaa cggtctggtc tttgccgacc gcacgccgca 3300 tccagcgctg acggaagcaa aacaccagca gcagtttttc cagttccgtt tatccgggca 3360 aaccatcgaa gtgaccagcg aatacctgtt ccgtcatagc gataacgagc tcctgcactg 3420 gatggtggcg ctggatggta agccgctggc aagcggtgaa gtgcctctgg atgtcgctcc 3480 acaaggtaaa cagttgattg aactgcctga actaccgcag ccggagagcg ccgggcaact 3540 ctggctcaca gtacgcgtag tgcaaccgaa cgcgaccgca tggtcagaag ccgggcacat 3600 cagogoctgg cagcagtggc gtctggcgga aaacctcagt gtgacgctcc ccgccqcqtc 3660 ccacgccatc ccgcatctga ccaccagcga aatggatttt tgcatcgagc tgggtaataa 3720 gcgttggcaa tttaaccgcc agtcaggctt tctttcacag atgtggattg gcgataaaaa 3780 acaactgctg acgccgctgc gcgatcagtt cacccgtgtc gatagatctg aacagaaact 3840 catttccgaa gaagacctag tcgaccatca tcatcatcat caccggtaat aataggtaga 3900 taagtgactg attagatgca tttcgactag atccctcgac caattccggt tattttccac 3960 catattgccg tettttggca atgtgagggc ceggaaacet ggccetgtet tettgacgag 4020 cattectagg ggtctttccc ctctcgccaa aggaatgcaa ggtctgttga atgtcgtgaa 4080 ggaagcagtt cctctggaag cttcttgaag acaaacaacg tctgtagcga ccctttgcag 4140 gcagcggaac ccccacctg gcgacaggtg cctctgcggc caaaagccac gtgtataaga 4200 4260 tacacctgca aaggcggcac aaccccagtg ccacgttgtg agttggatag ttgtggaaag 4320 agtcaaatgg ctctcctcaa gcgtattcaa caaggggctg aaggatgccc agaaggtacc ccattgtatg ggatctgatc tggggcctcg gtgcacatgc tttacatgtg tttagtcgag 4380 gttaaaaaac gtctaggccc cccgaaccac ggggacgtgg ttttcctttg aaaaacacga 4440 tgataatacc atgaaaaagc ctgaactcac cgcgacgtct gtcgagaagt ttctgatcga 4500 4560 aaaqttcqac aqcqtctccq acctqatqca qctctcqqaq qqcqaaqaat ctcqtqcttt cagcttcgat gtaggaggc gtggatatgt cctgcgggta aatagctgcg ccgatggttt 4620 4680 ctacaaagat cgttatgttt atcggcactt tgcatcggcc gcgctcccga ttccggaagt gcttgacatt ggggaattta gcgagagcct gacctattgc atctcccgcc gtgcacaggg 4740

tgtcacgttg	caagacctgc	ctgaaaccga	actgcccgct	gttctgcagc	cggtcgcgga	4800
ggccatggat	gcgatcgctg	cggccgatct	tagccagacg	agcgggttcg	gcccattcgg	4860
accgcaagga	atcggtcaat	acactacatg	gcgtgatttc	atatgcgcga	ttgctgatcc	4920
ccatgtgtat	cactggcaaa	ctgtgatgga	cgacaccgtc	agtgcgtccg	tcgcgcaggc	4980
tctcgatgag	ctgatgcttt	gggccgagga	ctgccccgaa	gtccggcacc	tcgtgcacgc	5040
ggatttcggc	tccaacaatg	tcctgacgga	caatggccgc	ataacagcgg	tcattgactg	5100
gagcgaggcg	atgttcg g gg	attcccaata	cgaggtcgcc	aacatcttct	tctggaggcc	5160
gtggttggct	tgtatggagc	agcagacgcg	ctacttcgag	cggaggcatc	cggagcttgc	5220
aggatcgccg	cggctccggg	cgtatatgct	ccgcattggt	cttgaccaac	tctatcagag	5280
cttggttgac	ggcaatttcg	atgatgcagc	ttgggcgcag	ggtcgatgcg	acgcaatcgt	5340
ccgatccgga	gccgggactg	tcgggcgtac	acaaatcgcc	cgcagaagcg	cggccgtctg	5400
gaccgatggc	tgtgtagaag	tactcgccga	tagtggaaac	cgacgcccca	gcactcgtcc	5460
gagggcaaag	gaatagagta	gatgccgacc	gggatctatc	gataaaataa	aagattttat	5520
ttagtctcca	gaaaaagggg	ggaatgaaag	accccacctg	taggtttggc	aagctagctt	5580
aagtaacgcc	attttgcaag	gcatggaaaa	atacataact	gagaatagag	aagttcagat	5640
caaggtcagg	aacagatgga	acagctgaat	atgggccaaa	caggatatct	gtggtaagca	5700
gttcctgccc	cggctcaggg	ccaagaacag	atggaacagc	tgaatatggg	ccaaacagga	5760
tatctgtggt	aagcagttcc	tgccccggct	cagggccaag	aacagatggt	ccccagatgc	5820
ggtccagccc	tcagcagttt	ctagagaacc	atcagatgtt	tccagggtgc	cccaaggacc	5880
tgaaatgacc	ctgtgcctta	tttgaactaa	ccaatcagtt	cgcttctcgc	ttctgttcgc	5940
gcgcttctgc	tccccgagct	caataaaaga	gcccacaacc	cctcactcgg	ggcgccagtc	6000
ctccgattga	ctgagtcgcc	cgggtacccg	tgtatccaat	aaaccctctt	gcagttgcat	6060
ccgacttgtg	gtctcgctgt	tccttgggag	ggtctcctct	gagtgattga	ctacccgtca	6120
gcgggggtct	ttcattcatg	cagcatgtat	caaaattaat	ttggtttttt	ttcttaagta	6180
tttacattaa	atggccatag	ttgcattaat	gaatcggcca	acgcgcgggg	agaggcggtt	6240
tgcgtattgg	cgctcttccg	cttcctcgct	cactgactcg	ctgcgctcgg	tcgttcggct	6300
gcggcgagcg	gtatcagctc	actcaaaggc	ggtaatacgg	tťatccacag	aatcagggga	6360
taacgcagga	aagaacatgt	gagcaaaagg	ccagcaaaag	gccaggaacc	gtaaaaaggc	6420
cgcgttgctg	gcgtttttcc	ataggctccg	ccccctgac	gagcatcaca	aaaatcgacg	6480
	ggccatggat accgcaagga ccatgtgtat tctcgatgag ggatttcggc gagcgaggcg gtggttggct aggatcgccg cttggttgac ccgatccgga gaccgatggc gagggcaaag ttagtctcca aagtaacgcc caaggtcagg gttcctgccc tatctgtggt ggtccagccc tgaaatgacc gcgcttctgc ctccgattga ccgacttgtg gcgggggtct tttacattaa tgcgtattgg gcgggggg	accgcaagga atcggtcaat ccatgtgtat cactggcaaa tctcgatgag ctgatgcttt ggatttcggc tccaacaatg gagcgaggcg atgttcgggg gtggttgct tgtatggagc aggatccgga gcggactg ccgatccgga gccgggactg gaccgatgc tgtgtagaag gagggcaaag gaatagagta ttagtctcca gaaaaagggg aagtaacgcc atttggaag caaggtcagg aacagatgga gttcctgcc cggctcaggg tatctgtgt aagcagttcc ggtccagcc tcagcagtt tgaaatgac ctgtgcctta gcgcttctgc tcccgagct ctccgattga ctgagtcgc ccgacttgt gcccgagct tgaaatgacc tcagcagt ttgaaatgacc tcagcagt tcccgattga ctgagtcgc ccgacttgt gccccagcc ccgacttgt gccccagc tcagcggggtct ttcatcatg tttacattaa atggccatag gcggcgagcg gtatcagctc taacgcagga aagaacatgt	ggccatggat gcgatcgctg cggccgatct accgcaagga atcggcaaa ctgtgatgga tctcgatgga ctgatgctt gggccgagga ggatttcggc tccaacaatg tcctgatgga tcccgatgga tcccaacaatg tcccaacaatg tcccaacaatg tcccaacaatg tcccaacaatg gggttggct tgtatggag agcagacgcg aggatcgccg cggctccggg cgtatatgct ctggttgac ggcaatttcg atgatggac tgtgtagaag tactcgcga gacggacag ggaatgaaag gacagaaggcg tgtgtagaag tactcgcga gagggcaaag gaatagaag gaatagaag gaatagaag gaatagaag gaatagaag gaatagaag gaatagaga acagctgaat gttcctgcc cggctcaggg ccaagaacag tactggag aacagatgga acagctgaat gttcctgcc cggctcaggg ccaagaacag tactggga aacagatgga acagctgaat gacagatgga acagctgaat ggccaagacc tcagaatgac ctggcctta tttgaactaa gcgcttctgc tccccgagct caataaaaga ccaagatga ctccgattg ctcccgagct caataaaaga ctccgattga ctgagtcgcc cgggtacccg ccgacttgtg gtctcgctt tccttgggag gcgggggtct tcatcatga cagcatgtat tttacattaa atggccatag ttgcattaat tttacattaa atggccatag taccagagc gtatcagcc caccagagc caccagagcg gtatcagcc caccagagcg caccagagcg caccaggc caccagagcg caccagagcg caccagacag caccagagcg gtatcagcc caccaagagcg caccagagcg caccagacag caccagagcg caccagacag caccagacag caccagagcg caccagacag cacca	ggccatggat gcgatcgctg cggccgatct tagccagacg accgcaagga atcggcaaa cacatacatg gcgtgatttc ccatggtat cactggcaaa ctgtgatgga cgacaccgtc tetegatgag ctgatgcttt gggccgagga ctgcccgga gagcgaggcg atgttcggc tccaacaatg tcctgacgga caatggccgc gagcgaggcg atgttcggg attcccaata cgaggtcgcc gtggttggct tgtatggag agcagacgcg ctacttcgag aggatcgccg cggctccggg cgtatatgct ccgcattggt cttggttgac ggcaatttcg atgatgcagc ttgggcgag ccgatcgga gccggactg tcgggcgac acaatcgcc gaccgatcgga gccggactg tcgggcgtac acaaatcgcc gaccgatggc tgtgtagaag tactcgcaga tagtggaaac gagggcaaag gaatagaga gatgccagc gggatctatc ttagtctca gaaaaagggg ggaatgaaag accccacctg aagtacagc atttgcaag gcaatgaaa atacataact caaggtcagg aacagatgga acagctgaat atgggcaaa gttcctgcc cggctcaggg ccaagaacag atggaacagc tatctgtgt aagcagtcc tgcccggct cagggccaag ggtccagcc tcagcagtt ctagagaaca atcagatgt tgaaatgac ctggccaag ggtccagcc tcagcgctta tttgaactaa ccaatcagtt gcgcttctgc tccccgagt caataaaaga gcccacaacc ctccgattga ctgagtcgcc cgggtacccg tgtatccaat ccgacttgt gtctcgct tcccgagt tccttggag ggtctcctct gcgggggtct ttcatcatg cagcatgat caacaataat tttacattaa atggccatag ttgcattaat gaatcggcca tgcgtattgg cgctcttccg ctcccgct cactgactcg gcgcagacg gtatcagct acccaacag ggtaatagg cgcacaaag ggcgagagg gtatcacca accacaggcgagagg gtatcacca accacagatga cagcagaga ggcacaaag ggcgagagag gtatcacca accacagatga cagcagaga ggcacaaag cagcagagag gaatacag ttgcattaat gaatcggcca tgcggagaga ggcacacaa accacacacacacacacaca	geocategat gegategete eggecgatet tagecagaeg agegggtteg acceptate cactegoraa etaeggaaa etaeggaaa etaeggaaaa etaegaaga etaeggaaaa etaegaaga etaeggaaga etaeggaaga etaeggaaga etaeggaaga etaeggaaga etaeggaaga etaeggaaga etaeggaaga etaeggaagaagaagagagagagagagagagagagagaga	types types the types of types of the types of types of the types of the types of types of the types of types of the types of the types of types of the types of types of the types of types of the types of type

ctcaagtcag	aggtggcgaa	acccgacagg	actataaaga	taccaggcgt	ttccccctgg	6540
aagctccctc	gtgcgctctc	ctgttccgac	cctgccgctt	accggatacc	tgtccgcctt	6600
tctcccttcg	ggaagcgtgg	cgctttctca	tagctcacgc	tgtaggtatc	tcagttcggt	6660
gtaggtcgtt	cgctccaagc	tgggctgtgt	gcacgaaccc	cccgttcagc	ccgaccgctg	6720
cgccttatcc	ggtaactatc	gtcttgagtc	caacccggta	agacacgact	tatcgccact	6780
ggcagcagcc	actggtaaca	ggattagcag	agcgaggtat	gtaggcggtg	ctacagagtt	6840
cttgaagtgg	tggcctaact	acggctacac	tagaagaaca	gtatttggta	tctgcgctct	6900
gctgaagcca	gttaccttcg	gaaaaagagt	tggtagctct	tgatccggca	aacaaaccac	6960
cgctggtagc	ggtggttttt	ttgtttgcaa	gcagcagatt	acgcgcagaa	aaaaaggatc	7020
tcaagaagat	cctttgatct	tttctacggg	gtctgacgct	cagtggaacg	aaaactcacg	7080
ttaagggatt	ttggtcatga	gattatcaaa	aaggatcttc	acctagatcc	ttttaaatta	7140
aaaatgaagt	ttgcggccgc	aaatcaatct	aaagtatata	tgagtaaact	tggtctgaca	7200
gttaccaatg	cttaatcagt	gaggcaccta	tctcagcgat	ctgtctattt	cgttcatcca	7260
tagttgcctg	actccccgtc	gtgtagataa	ctacgatacg	ggagggctta	ccatctggcc	7320
ccagtgctgc	aatgataccg	cgagacccac	gctcaccggc	tccagattta	tcagcaataa	7380
accagccagc	cggaagggcc	gagcgcagaa	gtggtcctgc	aactttatcc	gcctccatcc	7440
agtctattaa	ttgttgccgg	gaagctagag	taagtagttc	gccagttaat	agtttgcgca	7500
acgttgttgc	cattgctaca	ggcatcgtgg	tgtcacgctc	gtcgtttggt	atggcttcat	7560
tcagctccgg	ttcccaacga	tcaaggcgag	ttacatgatc	ccccatgttg	tgcaaaaaag	7620
cggttagctc	cttcggtcct	ccgatcgttg	tcagaagtaa	gttggccgca	gtgttatcac	7680
tcatggttat	ggcagcactg	cataattctc	ttactgtcat	gccatccgta	agatgctttt	7740
ctgtgactgg	tgagtactca	accaagtcat	tctgagaata	gtgtatgcgg	cgaccgagtt	7800
gctcttgccc	ggcgtcaata	cgggataata	ccgcgccaca	tagcagaact	ttaaaagtgc	7860
tcatcattgg	aaaacgttct	tcggggcgaa	aactctcaag	gatcttaccg	ctgttgagat	7920
ccagttcgat	gtaacccact	cgtgcaccca	actgatette	agcatctttt	actttcacca	7980
gcgtttctgg	gtgagcaaaa	acaggaaggc	aaaatgccgc	aaaaaaggga	ataagggcga	8040
cacggaaatg	ttgaatactc	atactcttcc	tttttcaata	ttattgaagc	atttatcagg	8100
gttattgtct	catgagcgga	tacatatttg	aatgtattta	gaaaaataaa	caaatagggg	8160
ttccgcgcac	atttc					8175

<210> 7

<211> 8175 <212> DNA <213> Unknown <220> <223> pICAST OMC. <400> 7 gacgtcggac ttatacccgg tttgtcctat agacaccatt cgtcaaggac ggggccgagt 60 cccqqttctt qtctaccttq tcqacttata cccqqtttqt cctataqaca ccattcqtca 120 180 aggacggggc cgagtcccgg ttcttgtcta ccaggggtct acgccaggtc gggagtcgtc 240 aaagatetet tggtagteta caaaggteee acggggttee tggaetttae tgggaeaegg 300 aataaacttg attggttagt caagcgaaga gcgaagacaa gcgcgcgaag acgaggggct 360 cqaqttattt tctcqqqtqt tqqqqaqtqa qccccqcqqt cagqaqqcta actgactcag cgggcccatg ggcacatagg ttatttggga gaacgtcaac gtaggctgaa caccagagcg 420 480 acaaggaacc ctcccagagg agactcacta actgatgggc agtcgccccc agaaagtaaa 540 cccccqaqca qqccctaqcc ctctqqqqac qqqtccctqq tgqctqqqtq gtgqcctcc qttcqaccqq tcqttgaata gacacagaca ggctaacaga tcacagatac tgactaaaat 600 660 acqcqqacqc aqccatqatc aatcqattga tcgaqacata gaccqcctgg gcaccacctt gactgctcaa gacttgtggg ccggcgttgg gaccctctgc agggtccctg aaacccccgg 720 780 caaaaacacc qqqctqqact ccttccctca qctacacctt aggctggggc agtcctatac 840 accaagacca tcctctgctc ttggattttg tcaagggcgg aggcagactt aaaaacgaaa 900 gccaaacctt ggcttcggcg cgcagaacag acgacgtcgt agcaagacac aacagagaca 960 gactgacaca aagacataaa cagactttta atcccggtct gacaatggtg agggaattca 1020 aactqqaatc cattqacctt tctacagctc gccqagcgag tgttggtcag ccatctacag ttcttctctq caacccaatg gaagacgaga cgtcttaccg gttggaaatt gcagcctacc 1080 qqcqctctqc cqtqqaaatt qgctctqqaq tagtqqqtcc aattctagtt ccagaaaaqt 1140 ggaccgggcg tacctgtggg tctggtccag gggatgtagc actggaccct tcggaaccga 1200 aaactggggg gagggaccca gttcgggaaa catgtgggat tcggaggcgg aggagaagga 1260 1320 qqtaqqcqqq qcaqaqqqq qqaacttqqa qqaqcaagct ggggcggagc taggagggaa 1380 ataggtcggg agtgaggaag agatccgcgg ccggcgagat cgggtaatta tgctgagtga 1440 tatcccqcta agcttagtcc ggaaccgcgc ggcctaggaa ttaattcgcg ttaaccctcc

accgccatcg	gagctctacc	cgcactaatg	cctaagtgac	cggcagcaaa	atgttgcagc	1500
actgaccctt	ttgggaccgc	aatgggttga	attagcggaa	cgtcgtgtag	ggggaaagcg	1560
gtcgaccgca	ttatcgcttc	tccgggcgtg	gctagcggga	agggttgtca	atgcgtcgga	1620
cttaccgctt	accgcgaaac	ggaccaaagg	ccgtggtctt	cgccacggcc	tttcgaccga	1680
cctcacgcta	gaaggactcc	ggctatgaca	gcagcagggg	agtttgaccg	tctacgtgcc	1740
aatgctacgc	gggtagatgt	ggttgcactg	gatagggtaa	tgccagttag	gcggcaaaca	1800
agggtgcctc	ttaggctgcc	caacaatgag	cgagtgtaaa	ttacaactac	tttcgaccga	1860
tgtccttccg	gtctgcgctt	aataaaaact	accgcaattg	agccgcaaag	tagacaccac	1920
gttgcccgcg	acccagccaa	tgccggtcct	gtcagcaaac	ggcagactta	aactggactc	1980
gcgtaaaaat	gcgcggcctc	ttttggcgga	gcgccactac	cacgacgcga	cctcactgcc	2040
gtcaatagac	cttctagtcc	tatacaccgc	ctactcgccg	taaaaggcac	tgcagagcaa	2100
cgacgtattt	ggctgatgtg	tttagtcgct	aaaggtacaa	cggtgagcga	aattactact	2160
aaagtcggcg	cgacatgacc	tccgacttca	agtctacacg	ccgctcaacg	cactgatgga	2220
tgcccattgt	caaagaaata	ccgtcccact	ttgcgtccag	cggtcgccgt	ggcgcggaaa	2280
gccgccactt	taatagctac	tcgcaccacc	aatacggcta	gcgcagtgtg	atgcagactt	2340
gcagcttttg	ggctttgaca	cctcgcggct	ttagggctta	gagatagcac	gccaccaact	2400
tgacgtgtgg	cggctgccgt	gcgactaact	tcgtcttcgg	acgctacagc	caaaggcgct	2460
ccacgcctaa	cttttaccag	acgacgacga	cttgccgttc	ggcaacgact	aagctccgca	2520
attggcagtg	ctcgtagtag	gagacgtacc	agtccagtac	ctactcgtct	gctaccacgt	2580
cctataggac	gactacttcg	tcttgttgaa	attgcggcac	gcgacaagcg	taataggctt	2640
ggtaggcgac	accatgtgcg	acacgctggc	gatgccggac	atacaccacc	tacttcggtt	2700
ataactttgg	gtgccgtacc	acggttactt	agcagactgg	ctactaggcg	cgaccgatgg	2760
ccgctactcg	cttgcgcatt	gcgcttacca	cgtcgcgcta	gcattagtgg	gctcacacta	2820
gtagaccagc	gaccccttac	ttagtccggt	gccgcgatta	gtgctgcgcg	acatagcgac	2880
ctagtttaga	cagctaggaa	gggcgggcca	cgtcatactt	ccgccgcctc	ggctgtggtg	2940
ccggtggcta	taataaacgg	gctacatgcg	cgcgcaccta	cttctggtcg	ggaagggccg	3000
acacggcttt	accaggtagt	tttttaccga	aagcgatgga	cctctctgcg	cgggcgacta	3060
ggaaacgctt	atgcgggtgc	gctacccatt	gtcagaaccg	ccaaagcgat	ttatgaccgt	3120
ccgcaaagca	gtcatagggg	caaatgtccc	gccgaagcag	accctgaccc	acctagtcag	3180

cgactaattt	atactacttt	tgccgttggg	caccagccga	atgccgccac	taaaaccgct	3240
atgcggcttg	ctagcggtca	agacatactt	gccagaccag	aaacggctgg	cgtgcggcgt	3300
aggtcgcgac	tgccttcgtt	ttgtggtcgt	cgtcaaaaag	gtcaaggcaa	ataggcccgt	3360
ttggtagctt	cactggtcgc	ttatggacaa	ggcagtatcg	ctattgctcg	aggacgtgac	3420
ctaccaccgc	gacctaccat	tcggcgaccg	ttcgccactt	cacggagacc	tacagcgagg	3480
tgttccattt	gtcaactaac	ttgacggact	tgatggcgtc	ggcctctcgc	ggcccgttga	3540
gaccgagtgt	catgcgcatc	acgttggctt	gcgctggcgt	accagtcttc	ggcccgtgta	3600
gtcgcggacc	gtcgtcaccg	cagaccgcct	tttggagtca	cactgcgagg	ggcggcgcag	3660
ggtgcggtag	ggcgtagact.	ggtggtcgct	ttacctaaaa	acgtagctcg	acccattatt	3720
cgcaaccgtt	aaattggcgg	tcagtccgaa	agaaagtgtc	tacacctaac	cgctattttt	3780
tgttgacgac	tgcggcgacg	cgctagtcaa	gtgggcacag	ctatctagac	ttgtctttga	3840
gtaaaggctt	cttctggatc	agctggtagt	agtagtagta	gtggccatta	ttatccatct	3900
attcactgac	taatctacgt	aaagctgatc	tagggagctg	gttaaggcca	ataaaaggtg	3960
gtataacggc	agaaaaccgt	tacactcccg	ggcctttgga	ccgggacaga	agaactgctc	4020
gtaaggatcc	ccagaaaggg	gagagcggtt	tccttacgtt	ccagacaact	tacagcactt	4080
ccttcgtcaa	ggagaccttc	gaagaacttc	tgtttgttgc	agacatcgct	gggaaacgtc	4140
cgtcgccttg	gggggtggac	cgctgtccac	ggagacgccg	gttttcggtg	cacatattct	4200
atgtggacgt	ttccgccgtg	ttggggtcac	ggtgcaacac	tcaacctatc	aacacctttc	4260
tcagtttacc	gagaggagtt	cgcataagtt	gttccccgac	ttcctacggg	tcttccatgg	4320
ggtaacatac	cctagactag	accccggagc	cacgtgtacg	aaatgtacac	aaatcagctc	4380
caattttttg	cagatccggg	gggcttggtg	cccctgcacc	aaaaggaaac	tttttgtgct	4440
actattatgg	tactttttcg	gacttgagtg	gcgctgcaga	cagctcttca	aagactagct	4500
tttcaagctg	tcgcagaggc	tggactacgt	cgagagcctc	ccgcttctta	gagcacgaaa	4560
gtcgaagcta	catcctcccg	cacctataca	ggacgcccat	ttatcgacgc	ggctaccaaa	4620
gatgtttcta	gcaatacaaa	tagccgtgaa	acgtagccgg	cgcgagggct	aaggccttca	4680
cgaactgtaa	ccccttaaat	cgcrctcgga	ctggataacg	tagagggcgg	cacgtgtccc	4740
acagtgcaac	gttctggacg	gactttggct	tgacgggcga	caagacgtcg	gccagcgcct	4800
ccggtaccta	cgctagcgac	gccggctaga	atcggtctgc	tcgcccaagc	cgggtaagcc	4860
tggcgttcct	tagccagtta	tgtgatgtac	cgcactaaag	tatacgcgct	aacgactagg	4920

ggtacacata	gtgaccgttt	gacactacct	gctgtggcag	tcacgcaggc	agcgcgtccg	4980
agagctactc	gactacgaaa	cccggctcct	gacggggctt	caggccgtgg	agcacgtgcg	5040
cctaaagccg	aggttgttac	aggactgcct	gttaccggcg	tattgtcgcc	agtaactgac	5100
ctcgctccgc	tacaagcccc	taagggttat	gctccagcgg	ttgtagaaga	agacctccgg	5160
caccaaccga	acatacctcg	tcgtctgcgc	gatgaagctc	gcctccgtag	gcctcgaacg	5220
tcctagcggc	gccgaggccc	gcatatacga	ggcgtaacca	gaactgcttg	agatagtctc	5280
gaaccaactg	ccgttaaagc	tactacgtcg	aacccgcgtc	ccagctacgc	tgcgttagca	5340
ggctaggcct	cggccctgac	agcccgcatg	tgtttagcgg	gcgtcttcgc	gccggcagac	5400
ctggctaccg	acacatcttc	atgagegget	atcacctttg	gctgcggggt	cgtgagcagg	5460
ctcccgtttc	cttatctcat	ctacggctgg	ccctagatag	ctattttatt	ttctaaaata	5520
aatcagaggt	ctttttcccc	ccttactttc	tggggtggac	atccaaaccg	ttcgatcgaa	5580
ttcattgcgg	taaaacgttc	cgtacctttt	tatgtattga	ctcttatctc	ttcaagtcta	5640
gttccagtcc	ttgtctacct	tgtcgactta	tacccggttt	gtcctataga	caccattcgt	5700
caaggacggg	gccgagtccc	ggttcttgtc	taccttgtcg	acttataccc	ggtttgtcct	5760
atagacacca	ttcgtcaagg	acggggccga	gtcccggttc	ttgtctacca	ggggtctacg	5820
ccaggtcggg	agtcgtcaaa	gatctcttgg	tagtctacaa	aggtcccacg	gggttcctgg	5880
actttactgg	gacacggaat	aaacttgatt	ggttagtcaa	gcgaagagcg	aagacaagcg	5940
cgcgaagacg	aggggctcga	gttattttct	cgggtgttgg	ggagtgagcc	ccgcggtcag	6000
gaggctaact	gactcagcgg	gcccatgggc	acataggtta	tttgggagaa	cgtcaacgta	6060
ggctgaacac	cagagcgaca	aggaaccctc	ccagaggaga	ctcactaact	gatgggcagt	6120
cgcccccaga	aagtaagtac	gtcgtacata	gttttaatta	aaccaaaaaa	aagaattcat	6180
aaatgtaatt	taccggtatc	aacgtaatta	cttagccggt	tgcgcgcccc	tctccgccaa	6240
acgcataacc	gcgagaaggc	gaaggagcga	gtgactgagc	gacgcgagcc	agcaagccga	6300
cgccgctcgc	catagtcgag	tgagtttccg	ccattatgcc	aataggtgtc	ttagtcccct	6360
attgcgtcct	ttcttgtaca	ctcgttttcc	ggtcgttttc	cggtccttgg	catttttccg	6420
gcgcaacgac	cgcaaaaagg	tatccgaggc	ggggggactg	ctcgtagtgt	ttttagctgc	6480
gagttcagtc	tccaccgctt	tgggctgtcc	tgatatttct	atggtccgca	aagggggacc	6540
ttcgagggag	cacgcgagag	gacaaggctg	ggacggcgaa	tggcctatgg	acaggcggaa	6600
agagggaagc	ccttcgcacc	gcgaaagagt	atcgagtgcg	acatccatag	agtcaagcca	6660

catccagcaa	gcgaggttcg	acccgacaca	cgtgcttggg	gggcaagtcg	ggctggcgac	6720
gcggaatagg	ccattgatag	cagaactcag	gttgggccat	tctgtgctga	atagcggtga	6780
ccgtcgtcgg	tgaccattgt	cctaatcgtc	tcgctccata	catccgccac	gatgtctcaa	6840
gaacttcacc	accggattga	tgccgatgtg	atcttcttgt	cataaaccat	agacgcgaga	6900
cgacttcggt	caatggaagc	ctttttctca	accatcgaga	actaggccgt	ttgtttggtg	6960
gcgaccatcg	ccaccaaaaa	aacaaacgtt	cgtcgtctaa	tgcgcgtctt	tttttcctag	7020
agttcttcta	ggaaactaga	aaagatgccc	cagactgcga	gtcaccttgc	ttttgagtgc	7080
aattccctaa	aaccagtact	ctaatagttt	ttcctagaag	tggatctagg	aaaatttaat	7140
ttttacttca	aacgccggcg	tttagttaga	tttcatatat	actcatttga	accagactgt	7200
caatggttac	gaattagtca	ctccgtggat	agagtcgcta	gacagataaa	gcaagtaggt	7260
atcaacggac	tgaggggcag	cacatctatt	gatgctatgc	cctcccgaat	ggtagaccgg	7320
ggtcacgacg	ttactatggc	gctctgggtg	cgagtggccg	aggtctaaat	agtcgttatt	7380
tggtcggtcg	gccttcccgg	ctcgcgtctt	caccaggacg	ttgaaatagg	cggaggtagg	7440
tcagataatt	aacaacggcc	cttcgatctc	attcatcaag	cggtcaatta	tcaaacgcgt	7500
tgcaacaacg	gtaacgatgt	ccgtagcacc	acagtgcgag	cagcaaacca	taccgaagta	7560
agtcgaggcc	aagggttgct	agttccgctc	aatgtactag	ggggtacaac	acgtttttc	7620
gccaatcgag	gaagccagga	ggctagcaac	agtcttcatt	caaccggcgt	cacaatagtg	7680
agtaccaata	ccgtcgtgac	gtattaagag	aatgacagta	cggtaggcat	tctacgaaaa	7740
gacactgacc	actcatgagt	tggttcagta	agactcttat	cacatacgcc	gctggctcaa	7800
cgagaacggg	ccgcagttat	gccctattat	ggcgcggtgt	atcgtcttga	aattttcacg	7860
agtagtaacc	ttttgcaaga	agccccgctt	ttgagagttc	ctagaatggc	gacaactcta	7920
ggtcaagcta	cattgggtga	gcacgtgggt	tgactagaag	tcgtagaaaa	tgaaagtggt	7980
cgcaaagacc	cactcgtttt	tgtccttccg	ttttacggcg	ttttttccct	tattcccgct	8040
gtgcctttac	aacttatgag	tatgagaagg	aaaaagttat	aataacttcg	taaatagtcc	8100
caataacaga	gtactcgcct	atgtataaac	ttacataaat	ctttttattt	gtttatcccc	8160
aaggcgcgtg	taaag					8175

<210> 8 <211> 8161 <212> DNA <213> Unknown

<220> <223> pICAST OMN.

<400> 8 ctgcagcctg aatatgggcc aaacaggata tctgtggtaa gcagttcctg ccccggctca 60 gggccaagaa cagatggaac agctgaatat gggccaaaca ggatatctgt ggtaagcagt 120 tectgececg geteagggee aagaacagat ggteeceaga tgeggteeag eecteageag 180 tttctagaga accatcagat gtttccaggg tgccccaagg acctgaaatg accctgtgcc 240 ttatttgaac taaccaatca gttcgcttct cgcttctgtt cgcgcgcttc tgctccccga 300 360 gctcaataaa agagcccaca acccctcact cggggcgcca gtcctccgat tgactgagtc gcccgggtac ccgtgtatcc aataaaccct cttgcagttg catccgactt gtggtctcgc 420 tgttccttgg gagggtctcc tctgagtgat tgactacccg tcageggggg tctttcattt 480 gggggctcgt ccgggatcgg gagacccctg cccagggacc accgacccac caccgggagg 540 caagetggcc agcaacttat ctgtgtctgt ccgattgtct agtgtctatg actgatttta 600 tgcqcctqcq tcqqtactaq ttaqctaact aqctctqtat ctqqcqqacc cqtqqtqqaa 660 720 ctgacgagtt ctgaacaccc ggccgcaacc ctgggagacg tcccagggac tttgggggcc 780 gtttttgtgg cccgacctga ggaagggagt cgatgtggaa tccgaccccg tcaggatatg tqqttctqqt aggaqacqaq aacctaaaac agttcccqcc tccqtctqaa tttttqcttt 840 cggtttggaa ccgaagccgc gcgtcttgtc tgctgcagca tcgttctgtg ttgtctctgt 900 960 ctgactgtgt ttctgtattt gtctgaaaat tagggccaga ctgttaccac tcccttaagt ttgaccttag gtaactggaa agatgtcgag cggctcgctc acaaccagtc ggtagatgtc 1020 1080 aagaagagac gttgggttac cttctgctct gcagaatggc caacctttaa cgtcggatgg ccqcqaqacq qcacctttaa ccqaqacctc atcacccaqq ttaaqatcaa qqtcttttca 1140 1200 cctggcccgc atggacaccc agaccaggtc ccctacatcg tgacctggga agccttggct 1260 tttgaccccc ctccctgggt caagcccttt gtacacccta agcctccgcc tcctcttcct ccatccqccc cqtctctccc ccttqaacct cctcqttcga ccccqcctcg atcctccctt 1320 tatocaqcco toactcotto totaggogoo ggoogotota goocattaat acgactoact 1380 1440 atagggcgat tcgaacacca tgcaccatca tcatcatcac gtcgacgaac agaaactcat ttccgaagaa gacctactcg agatgggcgt gattacggat tcactggccg tcgttttaca 1500 acgtcgtgac tgggaaaacc ctggcgttac ccaacttaat cgccttgcag cacatccccc 1560 1620 tttcgccagc tggcgtaata gcgaagaggc ccgcaccgat cgcccttccc aacagttacg

cagcctgaat	ggcgaatggc	gctttgcctg	gtttccggca	ccagaagcgg	tgccggaaag	1680
ctggctggag	tgcgatcttc	ctgaggccga	tactgtcgtc	gtcccctcaa	actggcagat	1740
gcacggttac	gatgcgccca	tctacaccaa	cgtgacctat	cccattacgg	tcaatccgcc	1800
gtttgttccc	acggagaatc	cgacgggttg	ttactcgctc	acatttaatg	ttgatgaaag	1860
ctggctacag	gaaggccaga	cgcgaattat	ttttgatggc	gttaactcgg	cgtttcatct	1920
gtggtgcaac	gggcgctggg	tcggttacgg	ccaggacagt	cgtttgccgt	ctgaatttga	1980
cctgagcgca	tttttacgcg	ccggagaaaa	ccgcctcgcg	gtgatggtgc	tgcgctggag	2040
tgacggcagt	tatctggaag	atcaggatat	gtggcggatg	agcggcattt	tccgtgacgt	2100
ctcgttgctg	cataaaccga	ctacacaaat	cagcgatttc	catgttgcca	ctcgctttaa	2160
tgatgatttc	agccgcgctg	tactggaggc	tgaagttcag	atgtgcggcg	agttgcgtga	2220
ctacctacgg	gtaacagttt	ctttatggca	gggtgaaacg	caggtcgcca	gcggcaccgc	2280
gcctttcggc	ggtgaaatta	tcgatgagcg	tggtggttat	gccgatcgcg	tcacactacg	2340
tctgaacgtc	gaaaacccga	aactgtggag	cgccgaaatc	ccgaatctct	atcgtgcggt	2400
ggttgaactg	cacaccgccg	acggcacgct	gattgaagca	gaagcctgcg	atgtcggttt	2460
ccgcgaggtg	cggattgaaa	atggtctgct	gctgctgaac	ggcaagccgt	tgctgattcg	2520
aggcgttaac	cgtcacgagc	atcatcctct	gcatggtcag	gtcatggatg	agcagacgat	2580
ggtgcaggat	atcctgctga	tgaagcagaa	caactttaac	gccgtgcgct	gttcgcatta	2640
tccgaaccat	ccgctgtggt	acacgctgtg	cgaccgctac	ggcctgtatg	tggtggatga	2700
agccaatatt	gaaacccacg	gcatggtgcc	aatgaatcgt	ctgaccgatg	atccgcgctg	2760
gctaccggcg	atgagcgaac	gcgtaacgcg	aatggtgcag	cgcgatcgta	atcacccgag	2820
tgtgatcatc	tggtcgctgg	ggaatgaatc	aggccacggc	gctaatcacg	acgcgctgta	2880
tcgctggatc	aaatctgtcg	atccttcccg	cccggtgcag	tatgaaggcg	gcggagccga	2940
caccacggcc	accgatatta	tttgcccgat	gtacgcgcgc	gtggatgaag	accagccctt	3000
cccggctgtg	ccgaaatggt	ccatcaaaaa	atggctttcg	ctacctggag	agacgcgccc	3060
gctgatcctt	tgcgaatacg	cccacgcgat	gggtaacagt	cttggcggtt	tcgctaaata	3120
ctggcaggcg	tttcgtcagt	atccccgttt	acagggcggc	ttcgtctggg	actgggtgga	3180
tcagtcgctg	attaaatatg	atgaaaacgg	caacccgtgg	tcggcttacg	gcggtgattt	3240
tggcgatacg	ccgaacgatc	gccagttctg	tatgaacggt	ctggtctttg	ccgaccgcac	3300
gccgcatcca	gcgctgacgg	aagcaaaaca	ccagcagcag	tttttccagt	tccgtttatc	3360

cgggcaaacc	atcgaagtga	ccagcgaata	cctgttccgt	catagcgata	acgageteet	3420
gcactggatg	gtggcgctgg	atggtaagcc	gctggcaagc	ggtgaagtgc	ctctggatgt	3480
cgctccacaa	ggtaaacagt	tgattgaact	gcctgaacta	ccgcagccgg	agagcgccgg	3540
gcaactctgg	ctcacagtac	gcgtagtgca	accgaacgcg	accgcatggt	cagaagccgg	3600
gcacatcagc	gcctggcagc	agtggcgtct	ggcggaaaac	ctcagtgtga	cgctccccgc	3660
cgcgtcccac	gccatcccgc	atctgaccac	cagcgaaatg	gatttttgca	tcgagctggg	3720
taataagcgt	tggcaattta	accgccagtc	aggctttctt	tcacagatgt	ggattggcga	3780
taaaaaacaa	ctgctgacgc	cgctgcgcga	tcagttcacc	cgtgtcgata	gatctggagg	3840
tggtggcagc	aggccttggc	gcgccggatc	cttaattaac	aattgaccgg	taataatagg	3900
tagataagtg	actgattaga	tgcatttcga	ctagatccct	cgaccaattc	cggttatttt	3960
ccaccatatt	gccgtctttt	ggcaatgtga	gggcccggaa	acctggccct	gtcttcttga	4020
cgagcattcc	taggggtctt	tcccctctcg	ccaaaggaat	gcaaggtctg	ttgaatgtcg	4080
tgaaggaagc	agttcctctg	gaagcttctt	gaagacaaac	aacgtctgta	gcgacccttt	4140
gcaggcagcg	gaacccccca	cctggcgaca	ggtgcctctg	cggccaaaag	ccacgtgtat	4200
aagatacacc	tgcaaaggcg	gcacaacccc	agtgccacgt	tgtgagttgg	atagttgtgg	4260
aaagagtcaa	atggctctcc	tcaagcgtat	tcaacaaggg	gctgaaggat	gcccagaagg	4320
taccccattg	tatgggatct	gatctggggc	ctcggtgcac	atgctttaca	tgtgtttagt	4380
cgaggttaaa	aaacgtctag	gccccccgaa	ccacggggac	gtggttttcc	tttgaaaaac	4440
acgatgataa	taccatgaaa	aagcctgaac	tcaccgcgac	gtctgtcgag	aagtttctga	4500
tcgaaaagtt	cgacagcgtc	tccgacctga	tgcagctctc	ggagggcgaa	gaatctcgtg	4560
ctttcagctt	cgatgtagga	gggcgtggat	atgtcctgcg	ggtaaatagc	tgcgccgatg	4620
gtttctacaa	agatcgttat	gtttatcggc	actttgcatc	ggccgcgctc	ccgattccgg	4680
aagtgcttga	cattggggaa	tttagcgaga	gcctgaccta	ttgcatctcc	cgccgtgcac	4740
agggtgtcac	gttgcaagac	ctgcctgaaa	ccgaactgcc	cgctgttctg	cagccggt c g	4800
cggaggccat	ggatgcgatc	gctgcggccg	atcttagcca	gacgagcggg	ttcggcccat	4860
tcggaccgca	aggaatcggt	caatacacta	catggcgtga	tttcatatgc	gcgattgctg	4920
atccccatgt	gtatcactgg	caaactgtga	tggacgacac	cgtcagtgcg	tccgtcgcgc	4980
aggctctcga	tgagctgatg	ctttgggccg	aggactgc c c	cgaagtccgg	cacctcgtgc	5040
acgcggattt	cggct c caac	aatgtcctga	cggacaatgg	ccgcataaca	gcggtcattg	5100

actggagcga	ggcgatgttc	ggggattccc	aatacgaggt	cgccaacatc	ttcttctgga	5160
ggccgtggtt	ggcttgtatg	gagcagcaga	cgcgctactt	cgagcggagg	catccggagc	5220
ttgcaggatc	geegeggete	cgggcgtata	tgctccgcat	tggtcttgac	caactctatc	5280
agagettggt	tgacggcaat	ttcgatgatg	cagcttgggc	gcagggtcga	tgcgacgcaa	5340
tegteegate	cggagccggg	actgtcgggc	gtacacaaat	cgcccgcaga	agcgcggccg	5400
tctggaccga	tggctgtgta	gaagtactcg	ccgatagtgg	aaaccgacgc	cccagcactc	5460
gtccgagggc	aaaggaatag	agtagatgcc	gaccgggatc	tatcgataaa	ataaaagatt	5520
ttatttagtc	tccagaaaaa	ggggggaatg	aagaccccaa	cctgtaggtt	tggcaagcta	5580
gcttaagtaa	cgccattttg	caaggcatgg	aaaaatacat	aactgagaat	agagaagttc	5640
agatcaaggt	caggaacaga	tggaacagct	gaatatgggc	caaacaggat	atctgtggta	5700
agcagttcct	gccccggctc	agggccaaga	acagatggaa	cagctgaata	tgggccaaac	5760
aggatatctg	tggtaagcag	ttcctgcccc	ggctcagggc	caagaacaga	tggtccccag	5820
atgcggtcca	gccctcagca	gtttctagag	aaccatcaga	tgtttccagg	gtgccccaag	5880
gacctgaaat	gaccctgtgc	cttatttgaa	ctaaccaatc	agttcgcttc	tcgcttctgt	5940
tcgcgcgctt	ctgctccccg	agctcaataa	aagagcccac	aacccctcac	tcggggcgcc	6000
agtcctccga	ttgactgagt	cgcccgggta	cccgtgtatc	caataaaccc	tcttgcagtt	6060
gcatccgact	tgtggtctcg	ctgttccttg	ggagggtctc	ctctgagtga	ttgactaccc	6120
gtcagcgggg	gtctttcatt	catgcagcat	gtatcaaaat	taatttggtt	ttttttctta	6180
agtatttaca	ttaaatggcc	atagttgcat	taatgaatcg	gccaacgcgc	ggggagaggc	6240
ggtttgcgta	ttggcgctct	teegetteet	cgctcactga	ctcgctgcgc	tcggtcgttc	6300
ggctgcggcg	agcggtatca	gctcactcaa	aggcggtaat	acggttatcc	acagaatcag	6360
gggataacgc	aggaaagaac	atgtgagcaa	aaggccagca	aaaggccagg	aaccgtaaaa	6420
aggccgcgtt	gctggcgttt	ttccataggc	teegeeeeee	tgacgagcat	cacaaaaatc	6480
gacgctcaag	tcagaggtgg	cgaaacccga	caggactata	aagataccag	gcgtttcccc	6540
ctggaagctc	cctcgtgcgc	tctcctgttc	cgaccctgcc	gcttaccgga	tacctgtccg	6600
cctttctccc	ttcgggaagc	gtggcgcttt	ctcatagctc	acgctgtagg	tatctcagtt	6660
cggtgtaggt	cgttcgctcc	aagctgggct	gtgtgcacga	accccccgtt	cagcccgacc	6720
gctgcgcctt	atccggtaac	tatcgtcttg	agtccaaccc	ggtaagacac	gacttatcgc	6780
cactggcagc	agccactggt	aacaggatta	gcagagcgag	gtatgtaggc	ggtgctacag	6840

agttcttgaa	gtggtggcct	aactacggct	acactagaag	aacagtattt	ggtatctgcg	6900
ctctgctgaa	gccagttacc	ttcggaaaaa	gagttggtag	ctcttgatcc	ggcaaacaaa	6960
ccaccgctgg	tagcggtggt	ttttttgttt	gcaagcagca	gattacgcgc	agaaaaaaag	7020
gatctcaaga	agatcctttg	atcttttcta	cggggtctga	cgctcagtgg	aacgaaaact	7080
cacgttaagg	gattttggtc	atgagattat	caaaaaggat	cttcacctag	atccttttgc	7140
ggccgcaaat	caatctaaag	tatatatgag	taaacttggt	ctgacagtta	ccaatgctta	7200
atcagtgagg	cacctatctc	agcgatctgt	ctatttcgtt	catccatagt	tgcctgactc	7260
cccgtcgtgt	agataactac	gatacgggag	ggcttaccat	ctggccccag	tgctgcaatg	7320
ataccgcgag	acccacgctc	accggctcca	gatttatcag	caataaacca	gccagccgga	7380
agggccgagc	gcagaagtgg	tcctgcaact	ttatccgcct	ccatccagtc	tattaattgt	7440
tgccgggaag	ctagagtaag	tagttcgcca	gttaatagtt	tgcgcaacgt	tgttgccatt	7500
gctacaggca	tcgtggtgtc	acgctcgtcg	tttggtatgg	cttcattcag	ctccggttcc	7560
caacgatcaa	ggcgagttac	atgatccccc	atgttgtgca	aaaaagcggt	tagctccttc	7620
ggtcctccga	tcgttgtcag	aagtaagttg	gccgcagtgt	tatcactcat	ggttatggca	7680
gcactgcata	attctcttac	tgtcatgcca	tccgtaagat	gcttttctgt	gactggtgag	7740
tactcaacca	agtcattctg	agaatagtgt	atgcggcgac	cgagttgctc	ttgcccggcg	7800
tcaatacggg	ataataccgc	gccacatagc	agaactttaa	aagtgctcat	cattggaaaa	7860
cgttcttcgg	ggcgaaaact	ctcaaggatc	ttaccgctgt	tgagatccag	ttcgatgtaa	7920
cccactcgtg	cacccaactg	atcttcagca	tcttttactt	tcaccagcgt	ttctgggtga	7980
gcaaaaacag	gaaggcaaaa	tgccgcaaaa	aagggaataa	gggcgacacg	gaaatgttga	8040
atactcatac	tcttcctttt	tcaatattat	tgaagcattt	atcagggtta	ttgtctcatg	8100
agcggataca	tatttgaatg	tatttagaaa	aataaacaaa	taggggttcc	gcgcacattt	8160
С						8161

<210> 9 <211> 8161 <212> DNA <213> Unknown

<220>

<223> picast omn.

<400> 9

gacgtcggac ttatacccgg tttgtcctat agacaccatt cgtcaaggac ggggccgagt 60

cocggttctt gtctaccttg tcgacttata cccggtttgt cctatagaca ccattcgtca 120 aggacggggc cgagtcccgg ttcttgtcta ccaggggtct acgccaggtc gggagtcgtc 180 aaagatetet tggtagteta caaaggteec acggggttee tggaetttae tgggaeacgg 240 aataaacttg attggttagt caagcgaaga gcgaagacaa gcgcgcgaag acgaggggct 300 cqaqttattt tctcqqqtqt tqqqqaqtqa qccccqcqqt caqqaqqcta actqactcaq 360 cgggcccatg ggcacatagg ttatttggga gaacgtcaac gtaggctgaa caccagagcg 420 acaaggaacc ctcccaqagg agactcacta actgatgggc agtcgccccc agaaagtaaa 480 540 cccccqaqca qqccctaqcc ctctqqqqac qqqtccctqq tqqctqqqtq qtqqcctcc gttcgaccgg tcgttgaata gacacagaca ggctaacaga tcacagatac tgactaaaat 600 acqcqqacqc aqccatqatc aatcgattga tcgagacata gaccgcctgg gcaccacctt 660 720 gactgctcaa gacttgtggg ccggcgttgg gaccctctgc agggtccctg aaacccccgg caaaaacacc gggctggact ccttccctca gctacacctt aggctggggc agtcctatac 780 840 accaaqacca tectetqete ttqqattttq teaaqqqeqq aqqeaqaett aaaaacqaaa qccaaacctt qqcttcgqcq cqcaqaacaq acgacqtcgt agcaagacac aacagagaca 900 qactgacaca aagacataaa cagactttta atcccggtct gacaatggtg agggaattca 960 1020 aactggaatc cattgacctt tctacagctc gccgagcgag tgttggtcag ccatctacag 1080 ttcttctctg caacccaatg gaagacgaga cgtcttaccg gttggaaatt gcagcctacc qqcqctctqc cqtqqaaatt qqctctqqaq tagtqqqtcc aattctagtt ccagaaaagt 1140 1200 ggaccgggcg tacctgtggg tctggtccag gggatgtagc actggaccct tcggaaccga 1260 aaactggggg gagggaccca gttcgggaaa catgtgggat tcggaggcgg aggagaagga ggtaggcggg gcagagggg ggaacttgga ggagcaagct ggggcggagc taggagggaa 1320 1380 ataqqtcqqq aqtqaqqaaq aqatccqcgq ccggcgagat cgggtaatta tgctgagtga tatcccgcta agcttgtggt acgtggtagt agtagtagtg cagctgcttg tctttgagta 1440 1500 aaqqettett etggatgage tetaecegea etaatgeeta agtgaeegge ageaaaatgt 1560 tgcagcactg accettttgg gaccgcaatg ggttgaatta geggaaegte gtgtaggggg aaaqcqqtcq accqcattat cqcttctccg ggcgtggcta gcgggaaggg ttgtcaatgc 1620 gtcggactta ccqcttaccq cgaaacqgac caaaggccgt ggtcttcgcc acggcctttc 1680 1740 gaccgacctc acgctagaag gactccggct atgacagcag caggggagtt tgaccgtcta 1800 cqtqccaatq ctacqcqqqt aqatqtqqtt qcactqqata qqgtaatqcc aqttagqcqg

Page 42

caaacaaggg	tgcctcttag	gctgcccaac	aatgagcgag	tgtaaattac	aactactttc	1860
gaccgatgtc	cttccggtct	gcgcttaata	aaaactaccg	caattgagcc	gcaaagtaga	1920
caccacgttg	cccgcgaccc	agccaatgcc	ggtcctgtca	gcaaacggca	gacttaaact	1980
ggactcgcgt	aaaaatgcgc	ggcctctttt	ggcggagcgc	cactaccacg	acgcgacctc	2040
actgccgtca	atagaccttc	tagtcctata	caccgcctac	tcgccgtaaa	aggcactgca	2100
gagcaacgac	gtatttggct	gatgtgttta	gtcgctaaag	gtacaacggt	gagcgaaatt	2160
actactaaag	tcggcgcgac	atgacctccg	acttcaagtc	tacacgccgc	tcaacgcact	2220
gatggatgcc	cattgtcaaa	gaaataccgt	cccactttgc	gtccagcggt	cgccgtggcg	2280
cggaaagccg	ccactttaat	agctactcgc	accaccaata	cggctagcgc	agtgtgatgc	2340
agacttgcag	cttttgggct	ttgacacctc	gcggctttag	ggcttagaga	tagcacgcca	2400
ccaacttgac	gtgtggcggc	tgccgtgcga	ctaacttcgt	cttcggacgc	tacagccaaa	2460
ggcgctccac	gcctaacttt	taccagacga	cgacgacttg	ccgttcggca	acgactaagc	2520
tccgcaattg	gcagtgctcg	tagtaggaga	cgtaccagtc	cagtacctac	tcgtctgcta	2580
ccacgtccta	taggacgact	acttcgtctt	gttgaaattg	cggcacgcga	caagcgtaat	2640
aggcttggta	ggcgacacca	tgtgcgacac	gctggcgatg	ccggacatac	accacctact	2700
tcggttataa	ctttgggtgc	cgtaccacgg	ttacttagca	gactggctac	taggcgcgac	2760
cgatggccgc	tactcgcttg	cgcattgcgc	ttaccacgtc	gcgctagcat	tagtgggctc	2820
acactagtag	accagcgacc	ccttacttag	tccggtgccg	cgattagtgc	tgcgcgacat	2880
agcgacctag	tttagacagc	taggaagggc	gggccacgtc	atacttccgc	cgcctcggct	2940
gtggtgccgg	tggctataat	aaacgggcta	catgcgcgcg	cacctacttc	tggtcgggaa	3000
gggccgacac	ggctttacca	ggtagttttt	taccgaaagc	gatggacctc	tctgcgcggg	3060
cgactaggaa	acgcttatgc	gggtgcgcta	cccattgtca	gaaccgccaa	agcgatttat	3120
gaccgtccgc	aaagcagtca	taggggcaaa	tgtcccgccg	aagcagaccc	tgacccacct	3180
agtcagcgac	taatttatac	tacttttgcc	gttgggcacc	agccgaatgc	cgccactaaa	3240
accgctatgc	ggcttgctag	cggtcaagac	atacttgcca	gaccagaaac	ggctggcgtg	3300
cggcgtaggt	cgcgactgcc	ttcgttttgt	ggtcgtcgtc	aaaaaggtca	aggcaaatag	3360
gcccgtttgg	tagcttcact	ggtcgcttat	ggacaaggca	gtatcgctat	tgctcgagga	3420
cgtgacctac	caccgcgacc	taccattcgg	cgaccgttcg	ccacttcacg	gagacctaca	3480
gcgaggtgtt	ccatttgtca	actaacttga	cggacttgat	ggcgtcggcc	tctcgcggcc	3540

cgttgagacc gagtgtcatg cgcatcacgt tggcttgcgc tggcgtacca gtcttcgqcc 3600 cgtgtagtcg cggaccqtcg tcaccgcaga ccgccttttg gagtcacact gcgagggcg 3660 gcgcagggtg cggtagggcg tagactggtg gtcgctttac ctaaaaacgt agctcgaccc 3720 attattcgca accgttaaat tggcggtcag tccgaaagaa agtgtctaca cctaaccgct 3780 attttttgtt gacgactgcg gcgacgcgct agtcaagtgg gcacagctat ctagacctcc 3840 accaccgtcg tccggaaccg cgcggcctag gaattaattg ttaactggcc attattatcc 3900 atctattcac tgactaatct acgtaaagct gatctaggga gctggttaag gccaataaaa 3960 ggtggtataa cggcagaaaa ccgttacact cccgggcctt tggaccggga cagaagaact 4020 gctcgtaagg atccccagaa aggggagagc ggtttcctta cgttccagac aacttacagc 4080 acttectteg teaaggagae ettegaagaa ettetgtttg ttgeagaeat egetgggaaa 4140 cqtccgtcgc cttgqggggt ggaccgctgt ccacggagac gccggttttc ggtgcacata 4200 ttctatgtgg acgtttccgc cgtgttgggg tcacggtgca acactcaacc tatcaacac 4260 4320 tttctcagtt taccgagagg agttcgcata agttgttccc cgacttccta cgggtcttcc atggggtaac ataccctaga ctagaccccg gagccacgtg tacgaaatgt acacaaatca 4380 4440 gctccaattt tttgcagatc cggggggctt ggtgcccctg caccaaaagg aaactttttg tgctactatt atggtacttt ttcggacttg agtggcgctg cagacagctc ttcaaagact 4500 agcttttcaa gctgtcgcag aggctggact acgtcgagag cctcccgctt cttagagcac 4560 gaaagtcgaa gctacatcct cccgcaccta tacaggacgc ccatttatcg acgcggctac 4620 caaaqatqtt tctaqcaata caaataqccq tqaaacqtaq ccqgcqcqag ggctaaggcc 4680 ttcacgaact gtaacccctt aaatcgctct cggactggat aacgtagagg gcggcacgtg 4740 4800 toccacagtg caacgttetg gacggacttt ggcttgacgg gcgacaagac gtcggccagc 4860 gcctccggta cctacgctag cgacgccggc tagaatcggt ctgctcgccc aagccgggta agcctggcgt tccttagcca gttatgtgat gtaccgcact aaagtatacg cgctaacgac 4920 4980 taggggtaca catagtgacc gtttgacact acctgctgtg gcagtcacgc aggcagcgcg 5040 tecgagaget actegactae gaaaceegge teetgaeggg getteaggee gtggageaeg tgcgcctaaa gccgaggttg ttacaggact gcctgttacc ggcgtattgt cgccagtaac 5100 5160 tgacctcgct ccgctacaag cccctaaggg ttatgctcca gcggttgtag aagaagacct 5220 coggcaccaa cogaacatac ctogtogtot gogcgatgaa gotogcotoc gtaggcotog aacgtcctag cggcgccgag gcccgcatat acgaggcgta accagaactg gttgagatag 5280

tctcgaacca	actgccgtta	aagctactac	gtcgaacccg	cgtcccagct	acgctgcgtt	5340
agcaggctag	gcctcggccc	tgacagcccg	catgtgttta	gcgggcgtct	tegegeegge	5400
agacctggct	accgacacat	cttcatgagc	ggctatcacc	tttggctgcg	gggtcgtgag	5460
caggctcccg	tttccttatc	tcatctacgg	ctggccctag	atagctattt	tattttctaa	5520
aataaatcag	aggtcttttt	cccccttac	tttctggggt	ggacatccaa	accgttcgat	5580
cgaattcatt	gcggtaaaac	gttccgtacc	tttttatgta	ttgactctta	tctcttcaag	5640
tctagttcca	gtccttgtct	accttgtcga	cttatacccg	gtttgtccta	tagacaccat	5700
tcgtcaagga	cggggccgag	tcccggttct	tgtctacctt	gtcgacttat	acccggtttg	5760
tcctatagac	accattcgtc	aaggacgggg	ccgagtcccg	gttcttgtct	accaggggtc	5820
tacgccaggt	cgggagtcgt	caaagatctc	ttggtagtct	acaaaggtcc	cacggggttc	5880
ctggacttta	ctgggacacg	gaataaactt	gattggttag	tcaagcgaag	agcgaagaca	5940
agcgcgcgaa	gacgaggggc	tcgagttatt	ttctcgggtg	ttggggagtg	agccccgcgg	6000
tcaggaggct	aactgactca	gcgggcccat	gggcacatag	gttatttggg	agaacgtcaa	6060
cgtaggctga	acaccagagc	gacaaggaac	cctcccagag	gagactcact	aactgatggg	6120
cagtcgcccc	cagaaagtaa	gtacgtcgta	catagtttta	attaaaccaa	aaaaaagaat	6180
tcataaatgt	aatttaccgg	tatcaacgta	attacttagc	cggttgcgcg	cccctctccg	6240
ccaaacgcat	aaccgcgaga	aggcgaagga	gcgagtgact	gagcgacgcg	agccagcaag	6300
ccgacgccgc	tcgccatagt	cgagtgagtt	tccgccatta	tgccaatagg	tgtcttagtc	6360
ccctattgcg	tcctttcttg	tacactcgtt	ttccggtcgt	tttccggtcc	ttggcatttt	6420
tccggcgcaa	cgaccgcaaa	aaggtatccg	aggcgggggg	actgctcgta	gtgtttttag	6480
ctgcgagttc	agtctccacc	gctttgggct	gtcctgatat	ttctatggtc	cgcaaagggg	6540
gaccttcgag	ggagcacgcg	agaggacaag	gctgggacgg	cgaatggcct	atggacaggc	6600
ggaaagaggg	aagcccttcg	caccgcgaaa	gagtatcgag	tgcgacatcc	atagagtcaa	6660
gccacatcca	gcaagcgagg	ttcgacccga	cacacgtgct	tggggggcaa	gtcgggctgg	6720
cgacgcggaa	taggccattg	atagcagaac	tcaggttggg	ccattctgtg	ctgaatagcg	6780
gtgaccgtcg	tcggtgacca	ttgtcctaat	cgtctcgctc	c ata c atccg	ccacgatgtc	6840
tcaagaactt	caccaccgga	ttgatgccga	tgtgatcttc	ttgtcataaa	ccatagacgc	6900
gagacgactt	cggtcaatgg	aagcctttt	ctcaaccatc	gagaactagg	ccgtttgttt	6960
ggtggcgacc	ategecacca	aaaaaacaaa	cgttcgtcgt	ctaatgcgcg	tcttttttc	7020

ctagagttct	tctaggaaac	tagaaaagat	gccccagact	gcgagtcacc	ttgcttttga	7080
gtgcaattcc	ctaaaaccag	tactctaata	gtttttccta	gaagtggatc	taggaaaacg	7140
ccggcgttta	gttagatttc	atatatactc	atttgaacca	gactgtcaat	ggttacgaat	7200
tagtcactcc	gtggatagag	tcgctagaca	gataaagcaa	gtaggtatca	acggactgag	7260
gggcagcaca	tctattgatg	ctatgccctc	ccgaatggta	gaccggggtc	acgacgttac	7320
tatggcgctc	tgggtgcgag	tggccgaggt	ctaaatagtc	gttatttggt	cggtcggcct	7380
tcccggctcg	cgtcttcacc	aggacgttga	aataggcgga	ggtaggtcag	ataattaaca	7440
acggcccttc	gatctcattc	atcaagcggt	caattatcaa	acgcgttgca	acaacggtaa	7500
cgatgtccgt	agcaccacag	tgcgagcagc	aaaccatacc	gaagtaagtc	gaggccaagg	7560
gttgctagtt	ccgctcaatg	tactaggggg	tacaacacgt	tttttcgcca	atcgaggaag	7620
ccaggaggct	agcaacagtc	ttcattcaac	cggcgtcaca	atagtgagta	ccaataccgt	7680
cgtgacgtat	taagagaatg	acagtacggt	aggcattcta	cgaaaagaca	ctgaccactc	7740
atgagttggt	tcagtaagac	tcttatcaca	tacgccgctg	gctcaacgag	aacgggccgc	7800
agttatgccc	tattatggcg	cggtgtatcg	tcttgaaatt	ttcacgagta	gtaacctttt	7860
gcaagaagcc	ccgcttttga	gagttcctag	aatggcgaca	actctaggtc	aagctacatt	7920
gggtgagcac	gtgggttgac	tagaagtcgt	agaaaatgaa	agtggtcgca	aagacccact	7980
cgtttttgtc	cttccgtttt	acggcgtttt	ttcccttatt	cccgctgtgc	ctttacaact	8040
tatgagtatg	agaaggaaaa	agttataata	acttcgtaaa	tagtcccaat	aacagagtac	8100
tcgcctatgt	ataaacttac	ataaatcttt	ttatttgttt	atccccaagg	cgcgtgtaaa	8160
q						8161